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The Atchison, Topeka & Santa Fe Railway System

Standard Shop Efficiency Schedules

BLACKSMITH SHOP

Locomotive Department

Volume XIII

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Approved:
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Supt. Motive Power

TOPEKA, KANSAS:
Crane & Company, Publishers
1912

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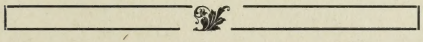
STANDARD BLACKSMITH SHOP EFFICIENCY SCHEDULES

VOLUME XI Treats of the operations in the Blacksmith Shop on Locomotive Cylinders, Frames and Frame Braces, Valves and Valve Motion, and Guides and Pistons.

VOLUME XII Treats of the operations in the Blacksmith Shop on Locomotive Main and Side Rods, Carrying Gear, Leading and Trailer Trucks, Driving and Truck Brakes, Driving Wheels and Boxes, and Steam and Dry Pipes.

VOLUME XIII Treats of the operations in the Blacksmith Shop on Locomotive Boiler Mountings, Cab and Wood Work, Air Brake Mechanism, Boiler, Ash Pan, Tender, and Forging of all Tools.

VOLUME XIV Treats of the operations in the Blacksmith Shop on Freight and Passenger Car Forgings.



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Ash Pan and Grate Rigging	312 to 457
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Forged Tools	619 to 759

STANDARD SCHEDULES

NUMBERS ASSIGNED TO SHOPS

---

1. Erecting Shop.
2. Machine Shop.
3. Boiler Shop.
4. Blacksmith Shop.
5. Tin Shop.
6. Pipe Shop.
7. Paint Shop.
8. Carpenter Shop.
9. Round House.
10. Miscellaneous (Water Service, Pile Driver, Derricks, etc.)

STANDARD SCHEDULES

LETTERS ASSIGNED TO DETAILED PARTS

LOCOMOTIVE

A. Cylinders.
B. Frames and Frame Braces.
C. Valves and Valve Motion.
D. Guides and Piston.
E. Main and Side Rods.
G. Carrying Gear.
H. Leading and Trailer Trucks.
J. Driving and Truck Brakes
K. Driving Wheels and Boxes.
L. Steam and Dry Pipes.
M. Boiler Mountings.
N. Cab and Wood Work.
O. Pipe and Tin Work.
Q. Air Brake Mechanism.
R. Boiler Shell, Firebox, Flues and Smoke Box.
S. Ash Pan and Grate Rigging.
T. Superheater.
U. Tender
V. Unassigned.
W. Miscellaneous Locomotive.
Y. Tools.

CAR

F. Freight Cars.
P. Passenger Cars

MISCELLANEOUS

X. Miscellaneous other than Locomotive.
Z. Miscellaneous—Foremen, Office, etc.

STANDARD BLACKSMITH SHOP SCHEDULES

NUMBERS ASSIGNED TO OPERATIONS

---

0. Annealed.
1. Balled up (upset).
2. Bend.
3. Closed.
4. Cut.
5. Case-hardened.
5a. Dismantled
6. Dressed.
7. Fitted.
8. Flattened.
9. Forged.
10. Formed.
11. Ground.
11a. Heated.
12. Lengthened
13. Made.
14. Moved.
14a. Painted.
15. Punched.
15a. Removed.
16. Scarfed.
17. Shortened.
17a. Squared.
18. Straightened
19. Shrunk.
19a. Tempered.
20. Twisted.
20a. Upset.
21. Welded.
22.

BOILER MOUNTINGS

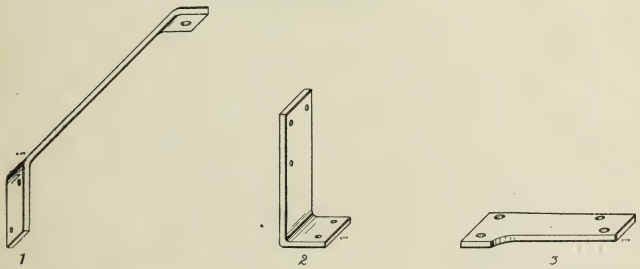
BLACKSMITH SHOP SCHEDULES.

LOCOMOTIVE DEPARTMENT.

BOILER MOUNTINGS

Box, Sand
BRACKET

Sand Box Brackets.



4M10–2 Bend, changed. **Rate**.....

Includes changing bend in sand box bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per bend changed after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4M10–4 Cut—Iron. **Rate**.....

Includes cutting iron for sand box bracket at power shears.

Power shears:

1–All sketches, per bracket.....

Box, Sand
BRACKET

4M10–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening sand box bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bracket after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M10–13 Made. **Rate**.....

Includes getting material for sand box bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bracket after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M10–18 Straightened. **Rate**.....

Includes straightening old sand box bracket when same has become bent.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bracket after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

BOILER MOUNTINGS
Box, Sand—Bracket

Box, Sand
BRACKET

4M10–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in sand box bracket, dressing and finishing over weld complete.

Forge:

1–Per first break.....

2–Per break after first one.....

4M10–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in sand box bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

7–As per sketch No. 1.....

8–As per sketch No. 2.....

9–As per sketch No. 3.....

Per place repaired after first one:

12–As per sketch No. 1.....

13–As per sketch No. 2.....

14–As per sketch No. 3.....

4M10–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in sand box bracket, dressing and finishing over weld complete.

Forge:

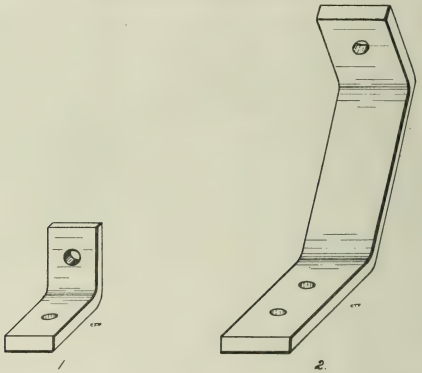
20–Per first hole.....

21–Per hole after first one.....

Box, Sand

BRACKET, STEP

Sand Box Step Brackets



4M12-2 Bend changed. **Rate**.....

Includes changing bend in sand box step bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....

Per bend changed after first one:

5–As per sketch No. 1 ....
6–As per sketch No. 2 ....

4M12-4 Cut—Iron. **Rate**.....

Includes cutting iron for sand box step bracket at power shears.

Power shears:

1–All sketches, per bracket ....

4M12-7 Fitted up. **Rate**.....

Includes heating and bending new sand box step bracket to fit boiler complete, after bracket has been made, or refitting old bracket to boiler.

Forge:

1–Per first bracket ....
2–Per bracket after first one ....

BOILER MOUNTINGS

Box, Sand—Step Bracket

Box, Sand
BRACKET, STEP

4M12–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening sand box step bracket by drawing out or upsetting same.

Forge.
Per first bracket:
1–As per sketch No. 1
2–As per sketch No. 2
Per bracket after first one:
5–As per sketch No. 1
6–As per sketch No. 2

4M12–13 Made. **Rate**

Includes getting material for sand box step bracket, forging, bending, dressing and finishing complete.

Forge.
Per first bracket:
1–As per sketch No. 1
2–As per sketch No. 2
Per bracket after first one:
5–As per sketch No. 1
6–As per sketch No. 2

4M12–18 Straightened. **Rate**

Includes straightening old sand box step bracket when same has become bent.

Forge.
Per first bracket:
1–As per sketch No. 1
2–As per sketch No. 2

4M12–21 Welded (break). **Rate**

Includes doing necessary scarfing, welding break in sand box step bracket, dressing and finishing over weld complete.

Forge:
1–Per first place repaired
2–Per place repaired after first one

Box, Sand

BRACKET, STEP

4M12–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in sand box step bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

Per place repaired after first one:

9–As per sketch No. 1.....

10–As per sketch No. 2.....

4M12–21 Welded (holes plugged). **Rate**.....

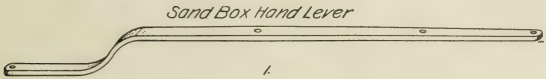
Includes making plug, welding same in hole in sand box step bracket, dressing and finishing over weld complete.

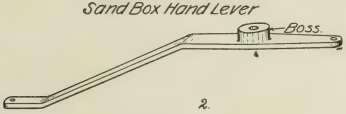
Forge:

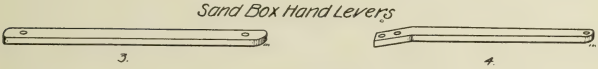
12–Per first hole.....

13–Per hole after first one.....

Box, Sand
LEVER, HAND







4M20–2 Bend changed. **Rate**

Includes changing bend in sand box hand lever.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 4 .....

Per bend changed after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 4 .....

4M20–4 Cut—Iron. **Rate**

Includes cutting iron at power shears for sand box hand lever.

Power shears:

1–All sketches, per lever .....

Box, Sand

LEVER, HAND

4M20-4 Cut and ground. **Rate**

Includes cutting iron for sand box hand lever at power shears, grinding ends of lever at emery wheel complete.

Power shears and emery wheel.

Per first lever:

4–As per sketch No. 3 .....
5–As per sketch No. 4 .....

Per lever after first one:

8–As per sketch No. 3 .....
9–As per sketch No. 4 .....

4M20-12 Lengthened or shortened. **Rate**

Includes lengthening or shortening sand box hand lever by drawing out or upsetting same.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per lever after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....

4M20-13 Made. **Rate**

Includes getting material for sand box hand lever, forging, bending, dressing and finishing complete.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per lever after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....

BOILER MOUNTINGS

Box, Sand—Hand Lever

Box, Sand

LEVER, HAND

4M20–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in sand box hand lever, dressing and finishing over weld complete.

Forge.

Per first lever:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per lever after first one:

9–As per sketch No. 1.....
10–As per sketch No. 2.....
11–As per sketch No. 3.....
12–As per sketch No. 4.....

4M20–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in sand box hand lever, dressing and finishing over weld complete.

Forge.

Per first lever:

30–As per sketch No. 1.....
31–As per sketch No. 2.....
32–As per sketch No. 3.....
33–As per sketch No. 4.....

Per lever after first one:

40–As per sketch No. 1.....
41–As per sketch No. 2.....
42–As per sketch No. 3.....
43–As per sketch No. 4.....

4M20–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in sand box hand lever, dressing and finishing over weld complete.

Forge.

Per first hole:

50–As per sketch No. 1.....
51–As per sketch No. 2, hole in end.....
52–As per sketch No. 3.....
53–As per sketch No. 3, hole in boss.....
54–As per sketch No. 4.....

Per hole after first one:

60–As per sketch No. 1.....
61–As per sketch No. 2, hole in end.....
62–As per sketch No. 3.....
63–As per sketch No. 3, hole in boss.....
64–As per sketch No. 4.....

Box, Sand

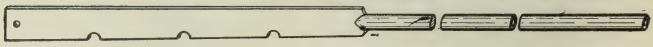
LEVER, HAND—ROD

Sand Box Hand Lever Rod.



1.

Sand Box Hand Lever Rod.



2.

4M22–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening sand box hand lever rod by drawing out or upsetting.

Forge.

Per first rod:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per rod after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M22–13 Made. **Rate**.....

Includes getting material for sand box hand lever rod, forging, bending, dressing and finishing complete.

Forge.

Per first rod:

1–As per sketch No. 2 .....

Per rod after first one:

5–As per sketch No. 2 .....

4M22–18 Straightened. **Rate**.....

Includes straightening old sand box hand lever rod when same has become bent.

Forge.

Per first bend repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per bend repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

BOILER MOUNTINGS

Box, Sand—Hand Lever Rod

Box, Sand

LEVER, HAND—ROD

4M22–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in sand box hand lever rod, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

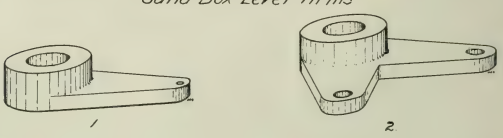
4M22–21 Welded (new end). **Rate**.....

Includes doing necessary scarfing, welding new end on sand box hand lever rod, dressing and finishing over weld complete.

Forge:

5–Per first end ....
6–Per end after first one..... .....

Box, Sand
VALVE ARM



4M28–13 Made. **Rate**

Includes getting material for sand box valve arm, forging, dressing, bending and finishing complete.

Forge.

Per first arm:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per arm after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M28–18 Straightened. **Rate**

Includes straightening old sand box valve arm when same has become bent.

Forge:

1–Per first arm .....
2–Per arm after first one .....

4M28–21 Welded (holes plugged). **Rate**

Includes making plug, welding same in hole in sand box valve arm, dressing and finishing over weld complete.

Forge:

1–Per first hole in flat end .....
2–Per hole after first one in flat end .....
3–Per first hole in boss end .....
4–Per hole after first one in boss end .....

4M28–21 Welded (new end). **Rate**

Includes getting material, welding necessary stock on flat end of old sand box valve arm, dressing and finishing end complete.

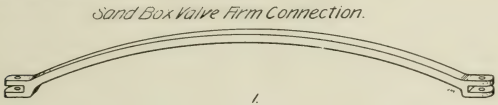
Forge:

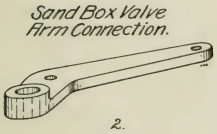
8–Per first end .....
9–Per end after first one .....

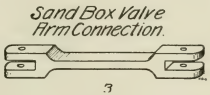
BOILER MOUNTINGS
Box, Sand—Valve Arm

Box, Sand

VALVE ARM CONNECTION







4M32–2 Bend, changed. **Rate**.....

Includes changing bend in sand box valve arm connection.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bend changed after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M32–6 Dressed. **Rate**.....

Includes dressing and finishing complete, sand box valve arm connection.

Forge.

Per first connection:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per connection after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Box, Sand

VALVE ARM CONNECTION

4M32–9 Forged. **Rate**

Includes getting material and blocking out and forging sand box valve arm connection complete, ready for dressing.

Steam hammer.

Per first connection:

1–As per sketch No. 1, forged solid
2–As per sketch No. 2, forged solid
3–As per sketch No. 3, forged solid

Per connection after first one:

7–As per sketch No. 1, forged solid
8–As per sketch No. 2, forged solid
9–As per sketch No. 3, forged solid

Forge.

Per first connection:

12–As per sketch No. 1, forged solid
13–As per sketch No. 2, forged solid
14–As per sketch No. 3, forged solid

Per connection after first one:

18–As per sketch No. 1, forged solid
19–As per sketch No. 2, forged solid
20–As per sketch No. 3, forged solid

4M32–9 Forged and dressed. **Rate**

Includes getting material, blocking out, forging, dressing and finishing sand box valve arm connection complete.

Forge.

Per first connection:

25–As per sketch No. 1, forged solid
26–As per sketch No. 2, forged solid
27–As per sketch No. 3, forged solid

Per connection after first one:

30–As per sketch No. 1, forged solid
31–As per sketch No. 2, forged solid
32–As per sketch No. 3, forged solid

Box, Sand
VALVE ARM CONNECTION

4M32–12 Lengthened or shortened (by drawing out or upsetting). **Rate**.....

Includes lengthening or shortening complete, sand box valve arm connection by drawing out or upsetting same.

Forge.

Per first connection:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per connection after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M32–12 Lengthened or shortened (by welding). **Rate**.....

Includes cutting sand box valve arm connection in two, taking out required stock or doing necessary scarfing, welding in required stock, dressing over weld and finishing connection to length complete.

Forge.

Per first weld in connection:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per weld in connection after first one:

18–As per sketch No. 1 .....
19–As per sketch No. 2 .....
20–As per sketch No. 3 .....

4M32–13 Made. **Rate**.....

Includes getting material, welding pieces together to form sand box valve arm connection, dressing and finishing arm connection complete.

Forge.

Per first connection:

1–As per sketch No. 1 .....
2–As per sketch No. 3 .....

Per connection after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 3 .....

Box, Sand
VALVE ARM CONNECTION

4M32–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in sand box valve arm connection, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4M32–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in sand box valve arm connection, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1.....
13–As per sketch No. 2.....
14–As per sketch No. 3.....

Per place repaired after first one:

18–As per sketch No. 1.....
19–As per sketch No. 2.....
20–As per sketch No. 3.....

4M32–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in sand box valve arm connection, dressing and finishing over weld complete.

Forge.

Per first hole:

25–As per sketch No. 1, hole in jaw end.....
26–As per sketch No. 2, hole in flat end.....
27–As per sketch No. 2, hole in boss end.....
28–As per sketch No. 3, hole in jaw end.....

Per hole after first one:

32–As per sketch No. 1, hole in jaw end.....
33–As per sketch No. 2, hole in flat end.....
34–As per sketch No. 2, hole in boss end.....
35–As per sketch No. 3, hole in jaw end.....

BOILER MOUNTINGS
Box, Sand—Valve Arm Connection

Box, Sand
VALVE ARM CONNECTION

4M32–21 Welded (new end) (includes making). **Rate**.....

Includes forging out new end for sand box valve arm connection, welding same in place of old end, dressing and finishing end complete.

Forge.

Per first end:

40–As per sketch No. 1, jaw end.....
41–As per sketch No. 2, flat end.....
42–As per sketch No. 3, jaw end.....

Per end after first one:

45–As per sketch No. 1, jaw end.....
46–As per sketch No. 2, flat end.....
47–As per sketch No. 3, jaw end.....

4M32–21 Welded (new end) (after same has been made). **Rate**.....

Includes getting new end of sand box valve arm connection, after same has been made, doing necessary scarfing, welding end on connection, dressing and finishing over weld complete.

Forge.

Per first end:

55–As per sketch No. 1, jaw end.....
56–As per sketch No. 2, flat end.....
57–As per sketch No. 3, jaw end.....

Per end after first one:

60–As per sketch No. 1, jaw end.....
61–As per sketch No. 2, flat end.....
62–As per sketch No. 3, jaw end.....

Box, Sand

VALVE ARM CONNECTION—END

4M34–13 Made. **Rate**.....

Includes getting material for end of sand box valve arm connection, forging and dressing complete, ready to be welded.

Forge.

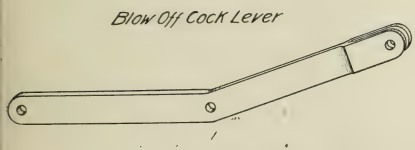
Per first end:

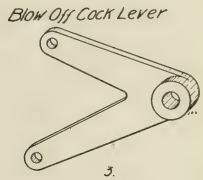
1–As per sketch No. 1, jaw end..... .....
2–As per sketch No. 2, flat end..... .....
3–As per sketch No. 3, jaw end..... .....

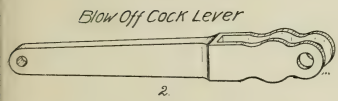
Per end after first one:

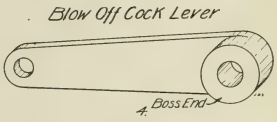
8–As per sketch No. 1, jaw end..... .....
9–As per sketch No. 2, flat end..... .....
10–As per sketch No. 3, jaw end..... .....

Cock, Blowoff
LEVER









4M40–2 Bend, changed. **Rate**.....

Includes changing bend in blowoff cock lever.

Forge.

Per first bend changed:

1–As per sketch No. 1.....

2–As per sketch No. 3.....

Per bend changed after first one:

5–As per sketch No. 1.....

6–As per sketch No. 3.....

4M40–6 Dressed. **Rate**.....

Includes dressing and finishing blowoff cock lever after same has been blocked out and forged.

Forge.

Per first lever:

1–As per sketch No. 3..... .....

2–As per sketch No. 4..... .....

Per lever after first one:

5–As per sketch No. 3..... .....

6–As per sketch No. 4..... .....

Cock, Blowoff
LEVER

4M40–9 Forged. **Rate**.....

Includes getting material, blocking out and forging blowoff cock lever complete.

Steam hammer.

Per first lever:

1–As per sketch No. 3.....
2–As per sketch No. 4.....

Per lever after first one:

5–As per sketch No. 3.....
6–As per sketch No. 4.....

Forge.

Per first lever:

10–As per sketch No. 3.....
11–As per sketch No. 4.....

Per lever after first one:

14–As per sketch No. 3.....
15–As per sketch No. 4.....

4M40–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw if necessary, dressing and finishing blowoff cock lever complete.

Forge.

Per first lever:

20–As per sketch No. 1.....
21–As per sketch No. 2, made solid.....
22–As per sketch No. 3.....
23–As per sketch No. 4.....

Per lever after first one:

27–As per sketch No. 1.....
28–As per sketch No. 2, made solid.....
29–As per sketch No. 3.....
30–As per sketch No. 4.....

BOILER MOUNTINGS
Cock, Blowoff—Lever

Cock, Blowoff
LEVER

4M40–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening blowoff cock lever by drawing out or upsetting same.

Forge.

Per first place lengthened or shortened:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place lengthened or shortened after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

4M40–13 Made. **Rate**.....

Includes getting material, doing necessary scarfing, welding to form blowoff cock lever, dressing and finishing lever to shape complete.

Forge:

1–Per first lever.....
2–Per lever after first one.....

4M40–18 Straightened. **Rate**.....

Includes straightening old blowoff cock lever when same has become bent or twisted.

Forge.

Per first place straightened:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place straightened after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

Cock, Blowoff
LEVER

4M40–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in blowoff cock lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place repaired after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

4M40–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in blowoff cock lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

20–As per sketch No. 1.....
21–As per sketch No. 2.....
22–As per sketch No. 3.....
23–As per sketch No. 4.....

Per place repaired after first one:

30–As per sketch No. 1.....
31–As per sketch No. 2.....
32–As per sketch No. 3.....
33–As per sketch No. 4.....

4M40–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in blowoff cock lever, dressing and finishing over weld complete.

Forge.

Per first hole:

40–Hole in body of lever as per sketches Nos. 1, 2, 3, 4.....
41–Hole in jaw as per sketches Nos. 1, 2.....
42–Hole in boss end as per sketches Nos. 3, 4.....

Per hole after first one:

45–Holes in body of lever as per sketches Nos. 1, 2, 3, 4.....
46–Holes in jaw end as per sketches Nos. 1, 2.....
47–Holes in boss end as per sketches Nos. 3, 4.....

BOILER MOUNTINGS
Cock, Blowoff—Lever

Cock, Blowoff
LEVER

4M40–21 Welded (new rounded ends on body) (making included). **Rate**.....

Includes welding piece for new end on old blowoff cock lever body, dressing and finishing rounded end complete.

Forge.

Per first end:

50–As per sketch No. 1 ....
51–As per sketch No. 2 ....
52–As per sketch No. 3 ....
53–As per sketch No. 4 ....

Per end after first one:

60–As per sketch No. 1 ....
61–As per sketch No. 2 ....
62–As per sketch No. 3 ....
63–As per sketch No. 4 ....

4M40–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material and forging new jaw end, welding same on old blowoff cock lever, dressing and finishing end complete.

Forge.

Per first end:

71–As per sketch No. 1 ....

Per end after first one:

73–As per sketch No. 1 ....

4M40–21 Welded (new jaw end) (making not included). **Rate**.....

Includes getting jaw end for blowoff cock lever after end has been made, welding end on body of old blowoff cock lever, dressing and finishing complete.

Forge.

Per first end:

80–As per sketch No. 1 ....

Per end after first one:

83–As per sketch No. 1 ....

Cock, Blowoff

LEVER—END, JAW

4M42–13 Made. **Rate**.....

Includes getting material, forging solid, dressing and finishing complete, jaw end for blowoff cock lever.

Forge.

Per first end:

1–As per sketch No. 1, forged solid..... .....

Per end after first one:

2–As per sketch No. 1, forged solid..... .....

4M42–13 Made from bar iron. **Rate**.....

Includes getting bar iron for jaw end of blowoff cock lever, cutting to length, doing necessary welding, dressing and finishing complete.

Forge:

5–Per first jaw end..... .....

6–Per jaw end after first one..... .....

BOILER MOUNTINGS

Cock, Blowoff—Lever Jaw End

Cock, Blowoff
LEVER FULCRUM



4M48–13 Made. **Rate**.....

Includes getting material for blowoff cock lever fulcrum, forging, bending, dressing and finishing complete.

Forge:

1–Per first fulcrum.....
2–Per fulcrum after first one.....

4M48–18 Straightened. **Rate**.....

Includes straightening old blowoff cock lever fulcrum when same has become bent.

Forge:

1–Per first fulcrum.....
2–Per fulcrum after first one.....

4M48–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in blowoff cock lever fulcrum, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....
2–Per place repaired after first one.....

4M48–21 Welded (holes plugged). **Rate**.....

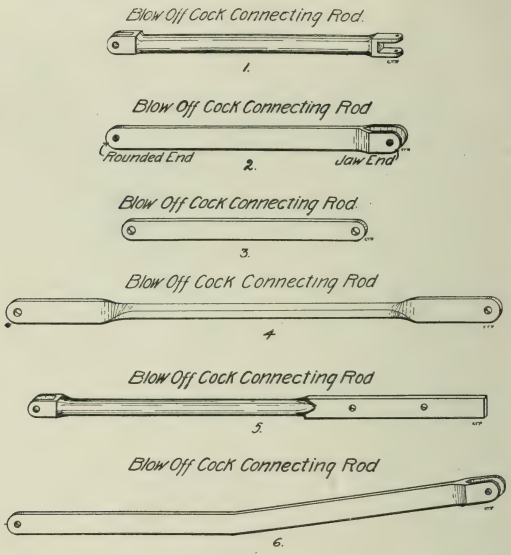
Includes making plug, welding same in hole in blowoff cock lever fulcrum, dressing and finishing over weld complete.

Forge:

5–Per first hole.....
6–Per hole after first one.....

Cock, Blowoff

ROD, CONNECTING



4M52–2 Bend, changed. **Rate**.....

Includes changing bend in blowoff cock connecting rod.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....
6–As per sketch No. 6 .....

Per bend changed after first one:

10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 3 .....
13–As per sketch No. 4 .....
14–As per sketch No. 5 .....
15–As per sketch No. 6 .....

BOILER MOUNTINGS

Cock, Blowoff—Connecting Rod

Cock, Blowoff

ROD, CONNECTING

4M52-4 Cut—Iron. **Rate**.....

Includes cutting iron for blowoff cock connecting rod at power shears.

Power shears:

1–Per piece cut..... .....

4M52-4 Cut and ground. **Rate**.....

Includes cutting iron for blowoff cock connecting rod at power shears, and grinding ends at emery wheel complete.

Power shears and emery wheel:

5–Per first blowoff cock connecting rod..... .....
6–Per blowoff cock connecting rod after first one..... .....

4M52-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening blowoff cock connecting rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....

Per rod after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....
15–As per sketch No. 6..... .....

4M52-13 Made. **Rate**.....

Includes getting material for blowoff cock connecting rod, forging, bending, dressing and finishing complete.

Forge.

Per first connecting rod:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....

Cock, Blowoff
ROD, CONNECTING

Per connecting rod after first one:
- 10–As per sketch No. 1 .....
- 11–As per sketch No. 2 .....
- 12–As per sketch No. 3 .....
- 13–As per sketch No. 4 .....
- 14–As per sketch No. 5 .....
- 15–As per sketch No. 6 .....

4M52–18 Straightened. **Rate**.....

Includes straightening old blowoff cock connecting rod when same has become bent.

Forge.

Per first place repaired:
- 1–As per sketch No. 1 .....
- 2–As per sketch No. 2 .....
- 3–As per sketch No. 3 .....
- 4–As per sketch No. 4 .....
- 5–As per sketch No. 5 .....
- 6–As per sketch No. 6 .....

Per place repaired after first one:
- 10–As per sketch No. 1 .....
- 11–As per sketch No. 2 .....
- 12–As per sketch No. 3 .....
- 13–As per sketch No. 4 .....
- 14–As per sketch No. 5 .....
- 15–As per sketch No. 6 .....

4M52–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in blowoff cock connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:
- 1–As per sketch No. 1 .....
- 2–As per sketch No. 2 .....
- 3–As per sketch No. 3 .....
- 4–As per sketch No. 4 .....
- 5–As per sketch No. 5 .....
- 6–As per sketch No. 6 .....

Per place repaired after first one:
- 10–As per sketch No. 1 .....
- 11–As per sketch No. 2 .....
- 12–As per sketch No. 3 .....
- 13–As per sketch No. 4 .....
- 14–As per sketch No. 5 .....
- 15–As per sketch No. 6 .....

BOILER MOUNTINGS
Cock, Blowoff—Connecting Rod

Cock, Blowoff
ROD, CONNECTING

4M52–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in blowoff cock connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

21–As per sketch No. 1.....
22–As per sketch No. 2.....
23–As per sketch No. 3.....
24–As per sketch No. 4.....
25–As per sketch No. 5.....
26–As per sketch No. 6.....

Per place repaired after first one:

30–As per sketch No. 1.....
31–As per sketch No. 2.....
32–As per sketch No. 3.....
33–As per sketch No. 4.....
34–As per sketch No. 5.....
35–As per sketch No. 6.....

4M52–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in blowoff cock connecting rod, dressing and finishing over weld complete.

Forge.

Per first hole, jaw end:

40–As per sketch No. 1.....
41–As per sketch No. 2.....
42–As per sketch No. 5.....
43–As per sketch No. 6.....

Per first hole, in body:

47–As per sketch No. 2.....
48–As per sketch No. 3.....
49–As per sketch No. 4.....
50–As per sketch No. 5.....
51–As per sketch No. 6.....

Per hole after first one, jaw end:

60–As per sketch No. 1.....
61–As per sketch No. 2.....
62–As per sketch No. 5.....
63–As per sketch No. 6.....

Per hole after first one, in body:

70–As per sketch No. 2.....
71–As per sketch No. 3.....
72–As per sketch No. 4.....
73–As per sketch No. 5.....
74–As per sketch No. 6.....

Cock, Blowoff

ROD, CONNECTING

4M52–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material and forging new jaw end for blowoff cock connecting rod, welding end on old rod, dressing and finishing end complete.

Forge.

Per first jaw end:

80–As per sketch No. 1 .....
81–As per sketch No. 2 .....
82–As per sketch No. 5 .....
83–As per sketch No. 6 .....

Per jaw end after first one:

85–As per sketch No. 1 .....
86–As per sketch No. 2 .....
87–As per sketch No. 5 .....
88–As per sketch No. 6 .....

4M52–21 Welded (new jaw end) (making not included). **Rate**.....

Includes getting new jaw end of blowoff cock connecting rod after same has been made, doing necessary scarfing, welding end on old connecting rod, dressing and finishing over weld complete.

Forge.

Per first jaw end:

95–As per sketch No. 1 .....
96–As per sketch No. 2 .....
97–As per sketch No. 5 .....
98–As per sketch No. 6 .....

Per jaw end after first one:

102–As per sketch No. 1 .....
103–As per sketch No. 2 .....
104–As per sketch No. 5 .....
105–As per sketch No. 6 .....

4M52–21 Welded (new round end). **Rate**.....

Includes welding piece on rounded end of old blowoff cock connecting rod, dressing and finishing rounded end complete.

Forge.

Per first end:

110–As per sketch No. 2 .....
111–As per sketch No. 3 .....
112–As per sketch No. 4 .....
113–As per sketch No. 6 .....

Per end after first one:

117–As per sketch No. 2 .....
118–As per sketch No. 3 .....
119–As per sketch No. 4 .....
120–As per sketch No. 6 .....

BOILER MOUNTINGS

Cock, Blowoff—Connecting Rod

Cock, Blowoff

ROD, CONNECTING—END, JAW

4M54–1 Made. **Rate**.....

Includes getting material for blowoff cock connecting rod jaw end, blocking out, forging, dressing and finishing complete.

Forge.

Per first end:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 5 .....
4–As per sketch No. 6 .....

Per end after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 5 .....
9–As per sketch No. 6 .....

Cock, Blowoff
SHAFT

Blow Off Cock Shaft



4M60–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for blowoff cock shaft.

Power shears:
1–Per shaft..... .....

4M60–18 Straightened. **Rate**.....

Includes straightening old blowoff cock shaft when same has become bent.

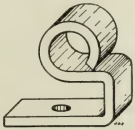
Forge:
1–Per first shaft repaired..... .....
2–Per shaft repaired after first one..... .....

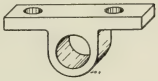
BOILER MOUNTINGS
Cock, Blowoff—Shaft

Cock, Blowoff
SHAFT BRACKET

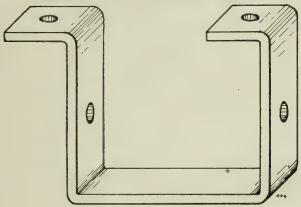
Blow Off Cock Shaft Brackets


1

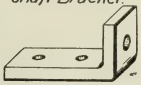

2


3

Blow Off Cock Shaft Brackets


4

Blow Off Cock Shaft Bracket


5

4M62–2 Bend, changed. **Rate**.....

Includes changing bend in blowoff cock shaft bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 4 .....
4–As per sketch No. 5 .....

Per bend changed after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 4 .....
11–As per sketch No. 5 .....

Cock, Blowoff

SHAFT BRACKET

4M62–6 Dressed. **Rate**.....

Includes dressing and finishing blowoff cock shaft bracket after same has been forged.

Forge.

Per first bracket:

1–As per sketch No. 3..... .....

Per bracket after first one:

3–As per sketch No. 3..... .....

4M62–9 Forged. **Rate**.....

Includes getting material, blocking out and forging blowoff cock shaft bracket.

Steam hammer.

Per first bracket:

1–As per sketch No. 3..... .....

Per bracket after first one:

3–As per sketch No. 3..... .....

Forge.

Per first bracket:

7–As per sketch No. 3..... .....

Per bracket after first one:

8–As per sketch No. 3..... .....

4M62–13 Made. **Rate**.....

Includes getting material for blowoff cock shaft bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per bracket after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....

BOILER MOUNTINGS

Cock, Blowoff—Shaft Bracket

Cock, Blowoff
SHAFT BRACKET

4M62–18 Straightened. **Rate**.....

Includes straightening old blowoff cock shaft bracket when same has become bent.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....

Per bracket after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....

4M62–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in blowoff cock shaft bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 4.....

Per place repaired after first one:

5–As per sketch No. 4.....

4M62–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in blowoff cock shaft bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....

Per place repaired after first one:

19–As per sketch No. 1.....
20–As per sketch No. 2.....
21–As per sketch No. 3.....
22–As per sketch No. 4.....
23–As per sketch No. 5.....

Cock, Blowoff

SHAFT BRACKET

4M62–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in blowoff cock shaft bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

30–All holes in sketches Nos. 1, 2, 3, 4, 5, except hole in boss sketch No. 3..... .....

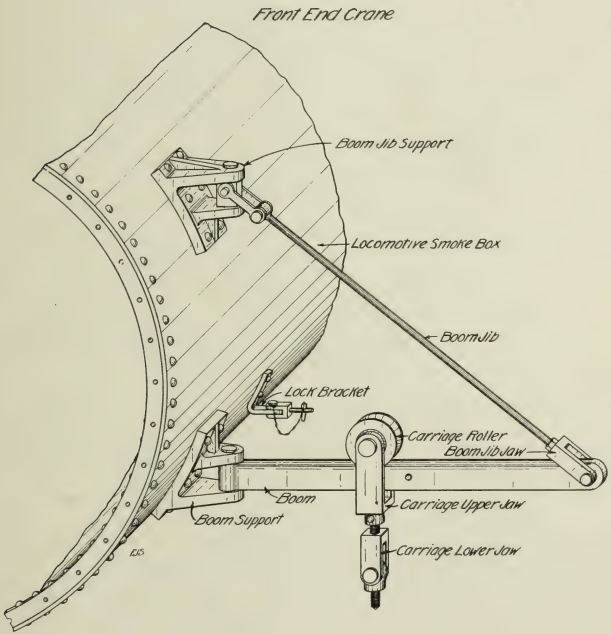
33–Hole in boss sketch No. 3..... .....

Per hole after first one:

37–All holes in sketches Nos. 1, 2, 3, 4, 5, except hole in boss sketch No. 3..... .....

39–Hole in boss sketch No. 3..... .....

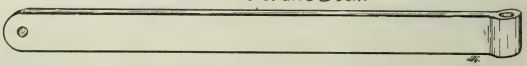
CRANE, FRONT END



BOILER MOUNTINGS
Front End Crane

Crane, Front End
BOOM

Front End Crane Boom



4M70–6 Dressed. **Rate**.....

Includes dressing and finishing front end crane boom after same has been forged.

Forge:
1–Per first boom.....
2–Per boom after first one.....

4M70–9 Forged. **Rate**.....

Includes getting material, blocking out and forging front end crane boom complete, ready for dressing.

Steam hammer:
1–Per first boom.....
2–Per boom after first one.....

Forge:
3–Per first boom.....
4–Per boom after first one.....

4M70–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, front end crane boom.

Forge:
8–Per first boom, forged solid.....
9–Per boom after first one, forged solid.....

4M70–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening front end crane boom by drawing out or upsetting same.

Forge:
1–Per first boom.....
2–Per boom after first one.....

4M70–13 Made from bar iron. **Rate**.....

Includes getting bar iron and cutting to length, dressing and finishing front end crane boom complete.

Forge:
1–Per first boom.....
2–Per boom after first one.....

BOILER MOUNTINGS
Crane, Front End—Boom

Crane, Front End
BOOM

4M70–13 Made (by forging boss end and welding on bar iron). **Rate**.....

Includes getting material for front end crane boom, blocking out and forging boss end, doing necessary scarfing, welding on bar iron on boom body, dressing and finishing boom complete.

Forge:
7–Per first boom.....
8–Per boom after first one.....

4M70–13 Made (boss end). **Rate**.....

Includes getting material for front end crane boom boss end, blocking out, forging and dressing complete.

Forge:
11–Per first boss end.....
12–Per boss end after first one.....

4M70–18 Straightened. **Rate**.....

Includes straightening old front end crane boom when same has become bent.

Forge:
1–Per first place repaired.....
2–Per place repaired after first one.....

4M70–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in front end crane boom, dressing and finishing over weld complete.

Forge:
1–Per first place repaired.....
2–Per place repaired after first one.....

4M70–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front end crane boom, dressing and finishing over weld complete.

Forge:
5–Per first place repaired.....
6–Per place repaired after first one.....

Crane, Front End
BOOM

4M70–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in front end crane boom, dressing and finishing over weld complete.

Forge.

Per first hole plugged:

9–Hole in rounded end.....

10–Hole in boss end.....

Per hole plugged after first one:

13–Hole in rounded end.....

14–Hole in boss end.....

4M70–21 Welded (new ends) (making included). **Rate**.....

Includes welding required stock on end of front end crane boom, dressing and finishing to shape complete.

Forge.

Per first end:

20–Rounded end.....

21–Boss end.....

Per end after first one:

27–Rounded end.....

28–Boss end.....

4M70–21 Welded (new boss ends) (after made). **Rate**.....

Includes getting new boss end after same has been made, doing necessary scarfing, welding boss end on body of front end crane boom, dressing and finishing over weld complete.

Forge:

33–Per boss end.....

37–Per boss end after first one.....

BOILER MOUNTINGS
Crane, Front End—Boom

Crane, Front End
BOOM JIB

Front End Crane Boom Jib



4M78–6 Dressed. **Rate**.....

Includes dressing and finishing front end crane boom jib complete, after same has been forged.

Forge:
1–Per first jib.....
2–Per jib after first one.....

4M78–9 Forged. **Rate**

Includes getting material, blocking out and forging front end crane boom jib complete, ready for dressing.

Steam hammer:
1–Per first jib.....
2–Per jib after first one.....

Forge:
3–Per first jib.....
4–Per jib after first one.....

4M78–9 Forged and dressed. **Rate**

Includes getting material, blocking out, forging, dressing and finishing front end crane boom jib complete.

Forge:
8–Per first jib.....
9–Per jib after first one.....

4M78–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening front end crane boom jib by drawing out or upsetting same.

Forge:
1–Per first jib.....
2–Per jib after first one.....

4M78–13 Made (by forging boss end and welding on bar iron). **Rate**

Includes getting material for front end crane boom jib, blocking out and forging boss end, doing necessary scarfing, welding bar iron on end, dressing and finishing complete.

Forge:
1–Per first jib.....
2–Per jib after first one.....

Crane, Front End
BOOM JIB

4M78–18 Straightened. **Rate**.....

Includes straightening old front end crane boom jib when same has become bent.

Forge:

1–Per first place repaired.....
2–Per place repaired after first one.....

4M78–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in front end crane boom jib, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....
2–Per place repaired after first one.....

4M78–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front end crane boom jib, dressing and finishing over weld complete.

Forge:

5–Per first place repaired.....
6–Per place repaired after first one.....

4M78–21 Welded (new boss ends) (making included). **Rate**.....

Includes getting material, blocking out and forging boss end of front end crane boom jib, doing necessary scarfing, welding ends on jib, dressing and finishing end complete.

Forge:

10–Per first end.....
11–Per end after first one.....

4M78–21 Welded (new ends) (making not included). **Rate**.....

Includes getting new boss end of front end crane boom jib after same has been forged, doing necessary scarfing, welding end on jib, dressing and finishing over weld complete.

Forge:

15–Per first end.....
16–Per end after first one.....

BOILER MOUNTINGS
Crane, Front End—Boom Jib

Crane, Front End

BOOM JIB—END, BOSS

4M80–13 Made. **Rate**.....

Includes getting material for front end crane boom jib boss end, blocking out, forging and finishing complete.

Steam hammer:

1–Per first boss end.....

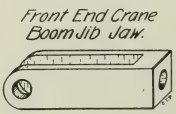
2–Per boss end after first one.....

Forge:

3–Per first boss end.....

4–Per boss end after first one.....

Crane, Front End
BOOM JIB JAW



4M84–6 Dressed. **Rate**.....

Includes cutting jaw if necessary, dressing and finishing complete, front end crane boom jib jaw after same has been forged.

Forge.

Per first jaw:

1–When jaw is cut at forge..... .....
2–When jaw is not cut at forge..... .....

Per jaw after first one:

5–When jaw is cut at forge..... .....
6–When jaw is not cut at forge..... .....

4M84–9 Forged. **Rate**.....

Includes getting material, blocking out, forging front end crane boom jib jaw, cutting jaw if necessary, complete.

Steam hammer.

Per first jaw:

1–When jaw is cut..... .....
2–When jaw is not cut..... .....

Per jaw after first one:

5–When jaw is cut..... .....
6–When jaw is not cut..... .....

Forge.

Per first jaw:

9–When jaw is cut..... .....
10–When jaw is not cut..... .....

Per jaw after first one:

14–When jaw is cut..... .....
15–When jaw is not cut..... .....

BOILER MOUNTINGS
Crane, Front End—Boom Jib Jaw

Crane, Front End
BOOM JIB JAW

4M84–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing front end crane boom jib jaw.

Forge:

21–Per first jaw when jaw is cut out.....
22–Per jaw after first one when jaw is cut out.....
23–Per first jaw when jaw is not cut out.....
24–Per jaw after first one when jaw is not cut out.....

4M84–18 Straightened. **Rate**.....

Includes straightening jaw of front end crane boom jib when jaw has become bent.

Forge:

1–Per first place repaired.....
2–Per place repaired after first one.....

4M84–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front end crane boom jib jaw, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....
2–Per place repaired after first one.....

4M84–21 Welded (holes plugged). **Rate**.....

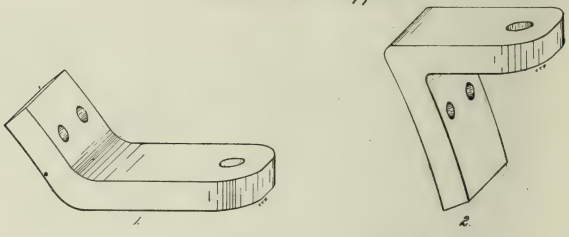
Includes making plug, welding same in hole in front end crane boom jib jaw, dressing and finishing over weld complete.

Forge:

5–Per first hole.....
6–Per hole after first one.....

Crane, Front End
BOOM SUPPORT

Front End Crane Boom Supports.



4M90–2 Bend changed. **Rate**.....

Includes changing bend in front end crane boom support.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bend changed after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M90–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening front end crane boom support by drawing out or upsetting same.

Forge.

Per first support:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per support after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

BOILER MOUNTINGS
Crane, Front End—Boom Support

Crane, Front End
BOOM SUPPORT

4M90–13 Made. **Rate**

Includes getting material for front end crane boom support, forging, bending, dressing and finishing complete.

Forge.
Per first support:
1–As per sketch No. 1
2–As per sketch No. 2
Per support after first one:
5–As per sketch No. 1
6–As per sketch No. 2

4M90–18 Straightened. **Rate**

Includes straightening old front end crane boom support when same has become bent.

Forge.
Per first place repaired:
1–As per sketch No. 1
2–As per sketch No. 2
Per place repaired after first one:
5–As per sketch No. 1
6–As per sketch No. 2

4M90–21 Welded (crack). **Rate**

Includes making dutchman, welding same in crack in front end crane boom support, dressing and finishing over weld complete.

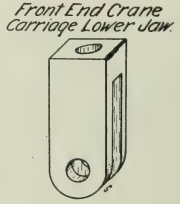
Forge.
Per first place repaired:
1–As per sketch No. 1
2–As per sketch No. 2
Per place repaired after first one:
5–As per sketch No. 1
6–As per sketch No. 2

4M90–21 Welded (hole plugged). **Rate**

Includes making plug, welding same in hole in front end crane boom support, dressing and finishing over weld complete.

Forge:
10–Per first hole
11–Per hole after first one

Crane, Front End
CARRIAGE—JAW, LOWER



4M100–6 Dressed. **Rate**.....

Includes cutting jaw if necessary, dressing and finishing complete, front end crane carriage lower jaw after same has been forged.

Forge.

Per first jaw:

1–When jaw is cut.....

2–When jaw is not cut.....

Per jaw after first one:

5–When jaw is cut.....

6–When jaw is not cut.....

4M100–9 Forged. **Rate**.....

Includes getting material, blocking out, forging front end crane carriage lower jaw, cutting jaw if necessary, complete.

Steam hammer.

Per first jaw:

1–When jaw is cut.....

2–When jaw is not cut.....

Per jaw after first one:

5–When jaw is cut.....

6–When jaw is not cut.....

Forge.

Per first jaw:

10–When jaw is cut.....

11–When jaw is not cut.....

Per jaw after first one:

15–When jaw is cut.....

16–When jaw is not cut.....

BOILER MOUNTINGS
Crane, Front End—Carriage Lower Jaw

Crane, Front End
CARRIAGE—JAW, LOWER

4M100–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing front end crane carriage lower jaw complete.

Forge.

When jaw is cut out:

21–Per first jaw..... .....
22–Per jaw after first one..... .....

When jaw is not cut out:

23–Per first jaw..... .....
24–Per jaw after first one..... .....

4M100–18 Straightened. **Rate**.....

Includes straightening lower jaw of front end crane carriage when same has become bent.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4M100–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front end crane carriage lower jaw, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4M100–21 Welded (holes plugged). **Rate**.....

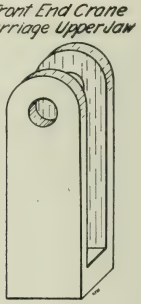
Includes making plug, welding same in hole in front end crane carriage lower jaw, dressing and finishing over weld complete.

Forge:

4–Per first hole..... .....
5–Per hole after first one..... .....

Crane, Front End

CARRIAGE—JAW, UPPER



4M102–6 Dressed. **Rate**.....

Includes cutting jaw if necessary, dressing and finishing complete, front end crane carriage upper jaw after same has been forged.

Forge.

Per first jaw:

1–When jaw is cut.....

2–When jaw is not cut.....

Per jaw after first one:

5–When jaw is cut.....

6–When jaw is not cut.....

4M102–9 Forged. **Rate**.....

Includes getting material, blocking out, forging front end crane carriage upper jaw, cutting jaw if necessary, complete.

Steam hammer.

Per first jaw:

1–When jaw is cut.....

2–When jaw is not cut.....

Per jaw after first one:

5–When jaw is cut.....

6–When jaw is not cut.....

Forge.

Per first jaw:

10–When jaw is cut.....

11–When jaw is not cut.....

Per jaw after first one:

15–When jaw is cut.....

16–When jaw is not cut.....

BOILER MOUNTINGS

Crane, Front End—Carriage Upper Jaw

Crane, Front End
CARRIAGE—JAW, UPPER

4M102–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing front end crane carriage upper jaw complete.

Forge.

When jaw is cut out:

21–Per first jaw.....

22–Per jaw after first one.....

When jaw is not cut out:

23–Per first jaw.....

24–Per jaw after first one.....

4M102–18 Straightened. **Rate**.....

Includes straightening upper jaw of front end crane carriage when jaw has become bent.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4M102–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front end crane carriage upper jaw, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4M102–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in front end crane carriage upper jaw, dressing and finishing over weld complete.

Forge:

5–Per first hole.....

6–Per hole after first one.....

Crane, Front End
LOCK BRACKET



4M108–2 Bend changed. **Rate**.....

Includes changing bend in front end crane lock bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....

Per bend changed after first one:

5–As per sketch No. 1..... .....

4M108–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening front end crane lock bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....

4M108–13 Made. **Rate**.....

Includes getting material for front end crane lock bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....

BOILER MOUNTINGS
Crane, Front End—Lock Bracket

Crane, Front End
LOCK BRACKET

4M108–18 Straightened. **Rate**.....

Includes straightening old front end crane lock bracket when same has become bent.

Forge.
Per first place repaired:
1–As per sketch No. 1.....
Per place repaired after first one:
5–As per sketch No. 1.....

4M108–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front end crane lock bracket, dressing and finishing over weld complete.

Forge.
Per first place repaired:
1–As per sketch No. 1.....
Per place repaired after first one:
5–As per sketch No. 1.....

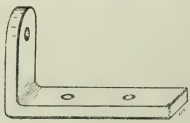
4M108–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in front end crane lock bracket, dressing and finishing over weld complete.

Forge:
9–Per first hole.....
10–Per hole after first one.....

Drip Pan
BRACKET

Drip Pan Bracket



4M112–2 Bend changed. **Rate**.....

Includes changing bend in drip pan bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4M112–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening drip pan bracket by drawing out or upsetting same.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M112–13 Made. **Rate**.....

Includes getting material for drip pan bracket, forging, bending, dressing and finishing complete.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M112–18 Straightened. **Rate**.....

Includes straightening old drip pan bracket when same has become bent.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4M112–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drip pan bracket, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

BOILER MOUNTINGS
Drip Pan Bracket

Drip Pan
BRACKET

4M112–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in drip pan bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4M112–21 Welded (holes plugged). **Rate**.....

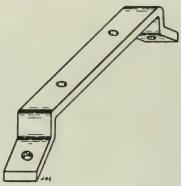
Includes making plug, welding same in hole in drip pan bracket, dressing and finishing over weld complete.

Forge:

11–Per first hole..... .....
12–Per hole after first one..... .....

Dynamo
BRACKET

Dynamo Bracket



4M114–2 Bend changed. **Rate**

Includes changing bend in dynamo bracket.

Forge:

1–Per first bend changed .....
2–Per bend changed after first one .....

4M114–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening dynamo bracket by drawing out or upsetting same.

Forge:

1–Per first bracket .....
2–Per bracket after first one .....

4M114–13 Made. **Rate**

Includes getting material for dynamo bracket, forging, bending, dressing and finishing complete.

Forge:

1–Per first bracket .....
2–Per bracket after first one .....

4M114–13 Made (at bulldozer). **Rate**

Includes changing dies in bulldozer and forging complete, dynamo bracket after iron has been cut and delivered to bulldozer.

Bulldozer:

5–Per first bracket .....
6–Per bracket after first one .....

BOILER MOUNTINGS
Dynamo Bracket

Dynamo

BRACKET

4M114–18 Straightened. **Rate**

Includes straightening old dynamo bracket when same has become bent.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4M114–21 Welded (break). **Rate**

Includes doing necessary scarfing, welding brake in dynamo bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4M114–21 Welded (crack). **Rate**

Includes making dutchman, welding same in crack in dynamo bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired.....

6–Per place repaired after first one.....

4M114–21 Welded (holes plugged). **Rate**

Includes making plug, welding same in hole in dynamo bracket, dressing and finishing over weld complete.

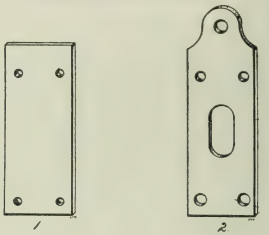
Forge:

9–Per first hole.....

10–Per hole after first one.....

Fountain, Steam
BRACKET

Steam Fountain Brackets.



4M120–4 Cut—Iron. **Rate**.....

Includes cutting iron for steam fountain bracket at power shears.

Power shears:

1–Per bracket cut ....

4M120–13 Made. **Rate**.....

Includes getting material for steam fountain bracket, forging, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M120–18 Straightened. **Rate**.....

Includes straightening old steam fountain bracket when same has become bent.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER MOUNTINGS
Fountain, Steam—Bracket

Fountain, Steam
BRACKET

4M120–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in steam fountain bracket, dressing and finishing over weld complete.

Forge.
Per first bracket:
1–As per sketch No. 2 .....
Per bracket after first one:
5–As per sketch No. 2 .....

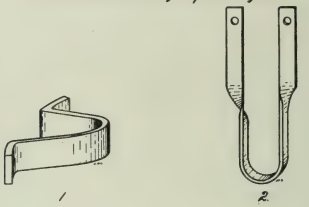
4M120–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in steam fountain bracket, dressing and finishing over weld complete.

Forge:
9–Per first hole .....
10–Per hole after first one .....

Fountain, Steam
DRY PIPE HANGER

Steam Fountain Dry Pipe Hangers



4M126—2 Bend, changed. **Rate**.....

Includes changing bend in steam fountain dry pipe hanger.

Forge.

Per first bend changed:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per bend changed after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4M126–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening steam fountain dry pipe hanger by drawing out or upsetting same.

Forge.

Per first hanger:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per hanger after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

BOILER MOUNTINGS
Fountain, Steam—Dry Pipe Hanger

Fountain, Steam
DRY PIPE HANGER

4M126—13 Made. **Rate**.....

Includes getting material for steam fountain dry pipe hanger, forging, bending, dressing and finishing complete.

Forge.

Per first hanger:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hanger after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M126—18 Straightened. **Rate**.....

Includes straightening old steam fountain dry pipe hanger when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
5–As per sketch No. 2..... .....

Per place repaired after first one:

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

4M126–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in steam fountain dry pipe hanger, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Fountain, Steam

DRY PIPE HANGER

4M126-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in steam fountain dry pipe hanger, dressing and finishing over weld complete.

Forge.

Per first place repaired:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4M126-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in steam fountain dry pipe hanger, dressing and finishing over weld complete.

Forge:

20–Per first hole plugged..... .....
21–Per hole plugged after first one..... .....

4M126-21 Welded (new ends). **Rate**.....

Includes welding new end on steam fountain dry pipe hanger, dressing and finishing end to shape complete.

Forge.

Per first end:

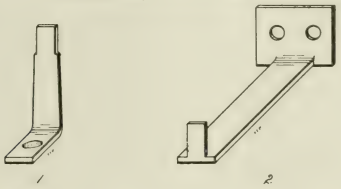
23–As per sketch No. 1..... .....
24–As per sketch No. 2..... .....

Per end after first one:

27–As per sketch No. 1..... .....
28–As per sketch No. 2..... .....

Gauge, Steam
LAMP BRACKET

Steam Guage Lamp Brackets.



4M140—7 Fitted up. **Rate**.....

Includes doing necessary scarfing, fitting up steam gauge lamp bracket to boiler head complete.

Forge.

Per first bracket:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per bracket after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M140–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening steam gauge lamp bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per bracket after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

Gauge, Steam
LAMP BRACKET

4M140—13 Made. **Rate**.....

Includes getting material for steam gauge lamp bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M140–18 Straightened. **Rate**.....

Includes straightening old steam gauge lamp bracket when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M140–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in steam gauge lamp bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER MOUNTINGS
Gauge, Steam—Lamp Bracket

Gauge, Steam

LAMP BRACKET

4M140–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in steam gauge lamp bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4M140–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in steam gauge lamp bracket, dressing and finishing over weld complete.

Forge:

20–Per first hole.....
21–Per hole after first one.....

4M140–21 Welded (new ends). **Rate**.....

Includes welding stock for new end on old steam gauge lamp bracket, dressing and finishing end to shape complete.

Forge.

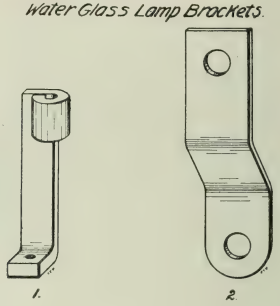
Per first end:

25–As per sketch No. 2 (large end)..... .....
26–As per sketch No. 2 (small end)..... .....

Per end after first one:

30–As per sketch No. 2 (large end)..... .....
31–As per sketch No. 2 (small end)..... .....

Glass, Water
LAMP BRACKET



4M146–2 Bend, changed. **Rate**.....

Includes changing bend in water glass lamp bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bend changed after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M146–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening water glass lamp bracket by drawing out or upsetting same.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

BOILER MOUNTINGS
Glass, Water—Lamp Bracket

Glass, Water
LAMP BRACKET

4M146–13 Made. **Rate**.....

Includes getting material for water glass lamp bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M146–18 Straightened. **Rate**.....

Includes straightening old water glass lamp bracket when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M146–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in water glass lamp bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Glass, Water

LAMP BRACKET

4M146–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in water glass lamp bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

9–As per sketch No. 1 .....

10–As per sketch No. 2 .....

Per place repaired after first one:

12–As per sketch No. 1 .....

13–As per sketch No. 2 .....

4M146–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in water glass lamp bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1 .....

21–As per sketch No. 2 .....

Per hole after first one:

25–As per sketch No. 1 .....

26–As per sketch No. 2 .....

4M146–21 Welded (new bottom end). **Rate**.....

Includes welding stock for new bottom end on water glass lamp bracket, dressing and finishing to shape complete.

Forge.

Per first end:

30–As per sketch No. 1 .....

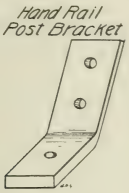
Per end after first one:

33–As per sketch No. 1 .....

BOILER MOUNTINGS

Glass, Water—Lamp Bracket

Hand Rail
POST BRACKET



4M160–2 Bend changed. **Rate** .....

Includes changing bend in hand rail post bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4M160–13 Made. **Rate**.....

Includes getting material for hand rail port bracket, forging, bending, dressing, and finishing complete.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M160–18 Straightened. **Rate**.....

Includes straightening old hand rail post bracket when same has become bent or twisted.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M160–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in hand rail post bracket, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Hand Rail

POST BRACKET

4M160–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in hand rail post bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4M160–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in hand rail post bracket, dressing and finishing over weld complete.

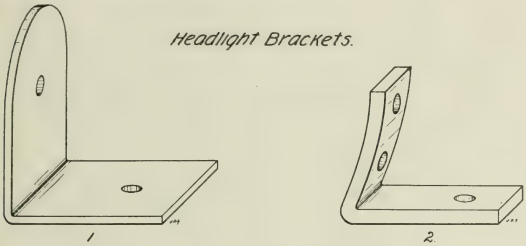
Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

BOILER MOUNTINGS

Hand Rail Post Bracket

Headlight
STEP BRACKET



4M168–2 Bend changed. **Rate**.....

Includes changing bend in headlight step bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bend changed after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M168–7 Fitted up. **Rate**.....

Includes getting new or old headlight step bracket, heating, and fitting same to boiler complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M168–13 Made. **Rate**.....

Includes getting material for headlight step bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bracket after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Headlight
STEP BRACKET

4M168–18 Straightened. **Rate**.....

Includes straightening old headlight step bracket when same has become bent.

Forge.

Per first bracket:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per bracket after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4M168–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in headlight step bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per place repaired after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4M168–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in headlight step bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1.....

11–As per sketch No. 2.....

Per place repaired after first one:

15–As per sketch No. 1.....

16–As per sketch No. 2.....

4M168–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in headlight step bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1.....

21–As per sketch No. 2.....

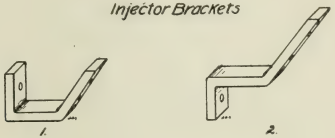
Per hole after first one:

25–As per sketch No. 1.....

26–As per sketch No. 2.....

BOILER MOUNTINGS
Headlight Step Bracket

Injector
BRACKET



4M176–2 Bend changed. **Rate** ....

Includes changing bend in injector bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bend changed after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M176–13 Made. **Rate** .....

Includes getting material for injector bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bracket after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M176–18 Straightened. **Rate** .....

Includes straightening old injector bracket when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

Injector

BRACKET

4M176–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in injector bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M176–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in injector bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4M176–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in injector bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....

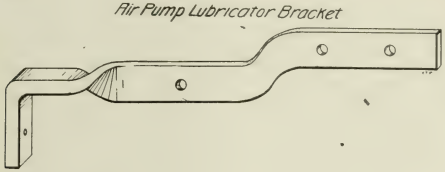
Per hole after first one:

25–As per sketch No. 1..... .....
26–As per sketch No. 2..... .....

BOILER MOUNTINGS

Injector Bracket

Lubricator, Air Pump
BRACKET



4M190–2 Bend changed. **Rate**.....

Includes changing bend in air pump lubricator bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4M190–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening air pump lubricator bracket by drawing out or upsetting same.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M190–13 Made. **Rate**.....

Includes getting material for air pump lubricator bracket, forging, bending, dressing and finishing complete.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4M190–18 Straightened. **Rate**.....

Includes straightening old air pump lubricator bracket when same has become bent or twisted.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Lubricator, Air Pump
BRACKET

4M190–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in air pump lubricator bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4M190–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in air pump lubricator bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4M190–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in air pump lubricator bracket, dressing and finishing over weld complete.

Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

Lubricator, Flange
BRACKET

Flange Lubricator Bracket



4M194–2 Bend changed. **Rate**.....

Includes changing bend in flange lubricator bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4M194–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening flange lubricator bracket by drawing out or upsetting same.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

Lubricator, Flange
BRACKET

4M194–13 Made. **Rate**

Includes getting material for flange lubraictor bracket, forging, bending, dressing and finishing complete.

Forge:

1–Per first bracket
2–Per bracket after first one

4M194–18 Straightened. **Rate**

Includes straightening old flange lubricator bracket when same has become bent or twisted.

Forge:

1–Per first place repaired
2–Per place repaired after first one

4M194–21 Welded (break). **Rate**

Includes doing necessary scarfing, welding break in flange lubricator bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired
2–Per place repaired after first one

4M194–21 Welded (crack). **Rate**

Includes making dutchman, welding same in crack in flange lubricator bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired
6–Per place repaired after first one

4M194–21 Welded (holes plugged). **Rate**

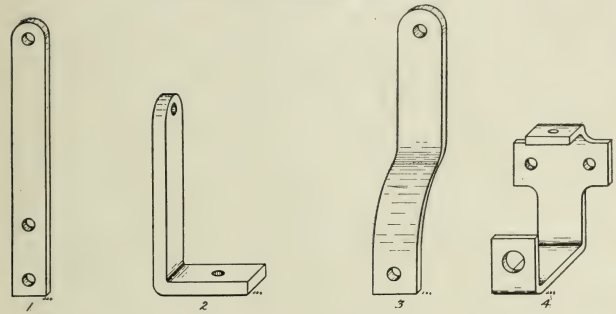
Includes making plug, welding same in hole in flange lubricator bracket, dressing and finishing over weld complete.

Forge:

10–Per first hole
11–Per hole after first one

Lubricator, Main
BRACKET

Main Lubricator Brackets



4M200–2 Bend changed. **Rate**.....

Includes changing bend in main lubricator bracket.

Forge.

Per first bend changed:

1–As per sketch No. 2.....
2–As per sketch No. 3.....
3–As per sketch No. 4.....

Per bend changed after first one:

7–As per sketch No. 2.....
8–As per sketch No. 3.....
9–As per sketch No. 4.....

4M200–4 Cut—Iron. **Rate**.....

Includes cutting iron for main lubricator bracket at power shears.

Power shears:

1–Per bracket cut.....

4M200–4 Cut and ground. **Rate**.....

Includes cutting iron for main lubricator bracket at power shears and grinding ends of bracket at emery wheel.

Power shears and emery wheel:

5–Per first bracket.....
6–Per bracket after first one.....

Lubricator, Main
BRACKET

4M200–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening main lubricator bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per bracket after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

4M200–13 Made. **Rate**.....

Includes getting material for main lubricator bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per bracket after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

4M200–18 Straightened. **Rate**.....

Includes straightening old main lubricator bracket when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

BOILER MOUNTINGS
Lubricator, Main—Bracket

Lubricator, Main
BRACKET

4M200–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in main lubricator bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place repaired after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

4M200–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in main lubricator bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

20–As per sketch No. 1.....
21–As per sketch No. 2.....
22–As per sketch No. 3.....
23–As per sketch No. 4.....

Per place repaired after first one:

27–As per sketch No. 1.....
28–As per sketch No. 2.....
29–As per sketch No. 3.....
30–As per sketch No. 4.....

4M200–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in main lubricator bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

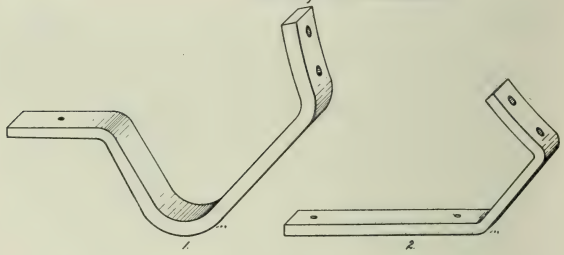
35–As per sketch No. 1.....
36–As per sketch No. 2.....
37–As per sketch No. 3.....
38–As per sketch No. 4.....

Per hole after first one:

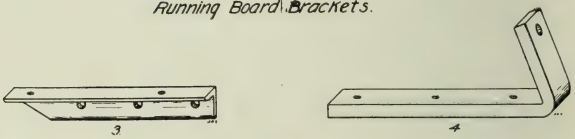
40–As per sketch No. 1.....
41–As per sketch No. 2.....
42–As per sketch No. 3.....
43–As per sketch No. 4.....

Running Board
BRACKET

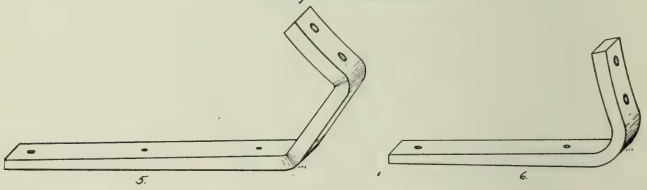
Running Board Brackets



Running Board Brackets.



Running Board Brackets.



4M300–2 Bend changed. **Rate**.....

Includes changing bend in running board bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 4.....
4–As per sketch No. 5.....
5–As per sketch No. 6.....

BOILER MOUNTINGS

Running Board Bracket

Running Board
BRACKET

Per bend changed after first one:
- 10–As per sketch No. 1 .....
- 11–As per sketch No. 2 .....
- 12–As per sketch No. 4 .....
- 13–As per sketch No. 5 .....
- 14–As per sketch No. 6 .....

4M300–4 Cut—Iron. **Rate**.....

Includes cutting iron for running board bracket at power shears.

Power shears:

Per first bracket:
- 1–As per sketch No. 3 .....

Per bracket after first one:
- 5–As per sketch No. 3 .....

4M300–7 Fitted up. **Rate**.....

Includes heating, bending and fitting up running board bracket to boiler complete.

Forge.

Per first bracket:
- 1–As per sketch No. 1 .....
- 2–As per sketch No. 2 .....
- 3–As per sketch No. 3 .....
- 4–As per sketch No. 4 .....
- 5–As per sketch No. 5 .....
- 6–As per sketch No. 6 .....

Per bracket after first one:
- 10–As per sketch No. 1 .....
- 11–As per sketch No. 2 .....
- 12–As per sketch No. 3 .....
- 13–As per sketch No. 4 .....
- 14–As per sketch No. 5 .....
- 15–As per sketch No. 6 .....

4M300–9 Forged Iron. **Rate**.....

Includes getting material and forging out iron for running board bracket complete, ready for finishing.

Steam hammer:
- 1–Per first bracket .....
- 2–Per bracket after first one .....

Forge:
- 3–Per first bracket .....
- 4–Per bracket after first one .....

Running Board
BRACKET

4M300–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening running board bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 4.....
4–As per sketch No. 5.....
5–As per sketch No. 6.....

Per bracket after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 4.....
13–As per sketch No. 5.....
14–As per sketch No. 6.....

4M300–13 Made. **Rate**.....

Includes getting material for running board bracket, forging out ends, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3, cut from angle iron.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....

Per bracket after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3, cut from angle iron.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....
15–As per sketch No. 6.....

4M300–13 Made (after iron is forged or from bar iron). **Rate**.....

Includes getting iron for running board bracket after same has been forged, doing necessary bending, dressing and finishing bracket to shape complete.

Forge.

Per first bracket:

20–As per sketch No. 1.....
21–As per sketch No. 2.....
22–As per sketch No. 4.....
23–As per sketch No. 5.....
24–As per sketch No. 6.....

BOILER MOUNTINGS
Running Board Bracket

Running Board
BRACKET

Per bracket after first one:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 4 .....
33–As per sketch No. 5 .....
34–As per sketch No. 6 .....

4M300–18 Straightened. **Rate** .....

Includes straightening old running board bracket when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....
6–As per sketch No. 6 .....

Per place repaired after first one:

10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 3 .....
13–As per sketch No. 4 .....
14–As per sketch No. 5 .....
15–As per sketch No. 6 .....

4M300–21 Welded (break). **Rate** .....

Includes doing necessary scarfing, welding break in running board bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 4 .....
4–As per sketch No. 5 .....
5–As per sketch No. 6 .....

Per place repaired after first one:

10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 4 .....
13–As per sketch No. 5 .....
14–As per sketch No. 6 .....

Running Board
BRACKET

4M300–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in running board bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

20–As per sketch No. 1.....
21–As per sketch No. 2.....
22–As per sketch No. 4.....
23–As per sketch No. 5.....
24–As per sketch No. 6.....

Per place repaired after first one:

30–As per sketch No. 1.....
31–As per sketch No. 2.....
32–As per sketch No. 4.....
33–As per sketch No. 5.....
34–As per sketch No. 6.....

4M300–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in running board bracket, dressing and finishing over weld complete.

Forge:

40–Per first hole.....
41–Per hole after first one.....

4M300–21 Welded (new ends). **Rate**.....

Includes welding stock on old running board bracket for new end, dressing and finishing end to shape complete.

Forge.

Per first end:

45–As per sketch No. 1.....
46–As per sketch No. 2.....
47–As per sketch No. 4.....
48–As per sketch No. 5.....
49–As per sketch No. 6.....

Per end after first one:

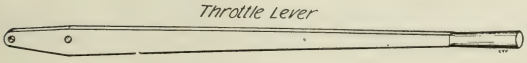
55–As per sketch No. 1.....
56–As per sketch No. 2.....
57–As per sketch No. 4.....
58–As per sketch No. 5.....
59–As per sketch No. 6.....

BOILER MOUNTINGS
Running Board Bracket

Throttle
LEVER



1



2

4M400–6 Dressed. **Rate**.....

Includes bending, dressing and finishing throttle lever complete, after same has been forged.

Forge.

Per first lever:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lever after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M400–9 Forged. **Rate**.....

Includes getting material, blocking out and forging throttle lever complete, ready for dressing.

Steam hammer.

Per first lever:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lever after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Forge.

Per first lever:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per lever after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

Throttle

LEVER

4M400–9 Forged and dressed. **Rate**

Includes getting material for throttle lever, blocking out, forging, dressing and finishing complete.

Forge.

Per first lever:

20–As per sketch No. 1 .....

21–As per sketch No. 2 .....

Per lever after first one:

26–As per sketch No. 1 .....

27–As per sketch No. 2 .....

4M400–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening throttle lever by drawing out or upsetting same.

Forge.

Per first lever:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per lever after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M400–21 Welded (break). **Rate**

Includes doing necessary scarfing, welding break in throttle lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

BOILER MOUNTINGS

Throttle Lever

Throttle

LEVER

4M400–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1.....

11–As per sketch No. 2.....

Per place repaired after first one:

15–As per sketch No. 1.....

16–As per sketch No. 2.....

4M400–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1.....

21–As per sketch No. 2.....

Per hole after first one:

25–As per sketch No. 1.....

26–As per sketch No. 2.....

4M400–21 Welded (new ends). **Rate**.....

Includes making ends, welding new stock on ends of throttle lever, dressing and finishing end to shape complete.

Forge.

Per first end:

30–As per sketch No. 1 (boss end).....

31–As per sketch No. 1 (handle end).....

32–As per sketch No. 2 (round end).....

33–As per sketch No. 2 (handle end).....

Per end after first one:

40–As per sketch No. 1 (boss end).....

41–As per sketch No. 1 (handle end).....

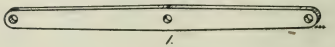
42–As per sketch No. 2 (round end).....

43–As per sketch No. 2 (handle end).....

Throttle

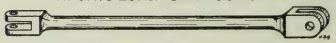
LEVER CONNECTION

Throttle Lever Connection.



1.

Throttle Lever Connection



2.

4M420–4 Cut—Iron. **Rate**.....

Includes cutting iron for throttle lever connection at power shears.

Power shears:

1–Per piece cut.....

4M420–4 Cut and ground. **Rate**.....

Includes cutting iron for throttle lever connection at power shears and grinding ends of same on emery wheel to shape complete.

Power shears and emery wheel.

Per first throttle connection:

5–As per sketch No. 1.....

Per throttle connection after first one:

7–As per sketch No. 1.....

4M420–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening throttle lever connection by drawing out or upsetting same.

Forge.

Per first connection:

1–As per sketch No. 1.....
2–As per sketch No. 2.....

Per connection after first one:

5–As per sketch No. 1.....
6–As per sketch No. 2.....

BOILER MOUNTINGS

Throttle Lever Connection

Throttle

LEVER CONNECTION

4M420–13 Made. **Rate**.....

Includes getting material for throttle lever connection, forging, bending, dressing and finishing complete.

Forge.

Per first connection:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per connection after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M420–18 Straightened. **Rate**.....

Includes straightening old throttle lever connection when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M420–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in throttle lever connection, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

Throttle

LEVER CONNECTION

4M420–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever connection, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4M420–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever connection, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....

Per hole after first one:

25–As per sketch No. 1..... .....
26–As per sketch No. 2..... .....

4M420–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material and forging new jaw end for throttle lever connection, welding same on old connection, dressing and finishing end complete.

Forge.

Per first end:

30–As per sketch No. 2..... .....

Per end after first one:

31–As per sketch No. 2..... .....

4M420–21 Welded (new jaw end) (making not included). **Rate**.....

Includes getting new jaw end of throttle lever connection after same has been made, doing necessary scarfing, welding end on connection, dressing and finishing over weld complete.

Forge.

Per first end:

35–As per sketch No. 2..... .....

Per end after first one:

37–As per sketch No. 2..... .....

BOILER MOUNTINGS

Throttle Lever Connection

Throttle

LEVER CONNECTION

4M420–21 Welded (new rounded end). **Rate**.....

Includes welding stock on rounded end of throttle lever connection, dressing and finishing end to shape complete.

Forge.

Per first end:

40–As per sketch No. 1.....

Per end after first one:

43–As per sketch No. 1.....

Throttle

LEVER CONNECTION, END, JAW

4M422–13 Made. **Rate**.....

Includes getting material for throttle lever connection jaw end, blocking out, forging, dressing and finishing complete.

Forge.

Per first end:

1–As per sketch No. 2.....

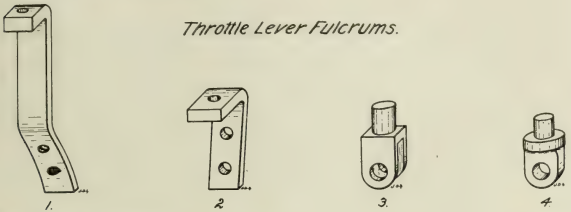
Per end after first one:

5–As per sketch No. 2.....

BOILER MOUNTINGS

Throttle Lever Connection Jaw End

Throttle
LEVER FULCRUM



4M450–2 Bend changed. **Rate**.....

Includes changing bend in throttle lever fulcrum.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bend changed after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4M450–4 Cut—Iron. **Rate**.....

Includes cutting iron for throttle lever fulcrum at power shears.

Power shears:

1–Per fulcrum .....

4M450–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening throttle lever fulcrum by drawing out or upsetting same.

Forge.

Per first fulcrum:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per fulcrum after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

Throttle

LEVER FULCRUM

4M450–13 Made. **Rate**.....

Includes getting material for throttle lever fulcrum, forging, bending, dressing and finishing complete.

Forge.

Per first fulcrum:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per fulcrum after first one:

10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 3 .....
13–As per sketch No. 4 .....

4M450–18 Straightened. **Rate**.....

Includes straightening old throttle lever fulcrum when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per place repaired after first one:

10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 3 .....
13–As per sketch No. 4 .....

4M450–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in throttle lever fulcrum, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

BOILER MOUNTINGS

Throttle Lever Fulcrum

Throttle

LEVER FULCRUM

4M450–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever fulcrum, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

Per place repaired after first one:

17–As per sketch No. 1.....
18–As per sketch No. 2.....
19–As per sketch No. 3.....
20–As per sketch No. 4.....

4M450–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever fulcrum, dressing and finishing over weld complete.

Forge.

Per first hole plugged:

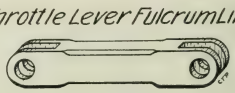
25–As per sketch No. 1.....
26–As per sketch No. 2.....
27–As per sketch No. 3.....
28–As per sketch No. 4.....

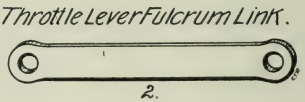
Per hole plugged after first one:

35–As per sketch No. 1.....
36–As per sketch No. 2.....
37–As per sketch No. 3.....
38–As per sketch No. 4.....

Throttle

LEVER FULCRUM LINK







4M454–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening throttle lever fulcrum link by drawing out or upsetting same.

Forge.

Per first link:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per link after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M454–13 Made. **Rate**.....

Includes getting material for throttle lever fulcrum link, forging, making jaws, dressing and finishing complete.

Forge.

Per first link:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per link after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

BOILER MOUNTINGS

Throttle Lever Fulcrum Link

Throttle
LEVER FULCRUM LINK

4M454–18 Straightened. **Rate**.....

Includes straightening old throttle lever fulcrum link when same has become bent.

Forge.

Per first link:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per link after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4M454–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in throttle lever fulcrum link, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....
7–As per sketch No. 3..... .....

4M454–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever fulcrum link, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....
17–As per sketch No. 3..... .....

Throttle

LEVER FULCRUM LINK

4M454–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever fulcrum link, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1.....

21–As per sketch No. 2.....

22–As per sketch No. 3.....

Per hole after first one:

26–As per sketch No. 1.....

27–As per sketch No. 2.....

28–As per sketch No. 3.....

4M454–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material, forging new jaw end for throttle lever fulcrum link, doing necessary scarfing, welding end on link, dressing and finishing complete.

Forge.

Per first end:

36–As per sketch No. 1.....

37–As per sketch No. 3.....

Per end after first one:

42–As per sketch No. 1.....

44–As per sketch No. 3.....

4M454–21 Welded (new jaw end) (making not included). **Rate**.....

Includes getting new jaw end after same has been made, doing necessary scarfing, welding end on old throttle lever fulcrum link, dressing and finishing over weld complete.

Forge.

Per first end:

50–As per sketch No. 1.....

51–As per sketch No. 3.....

Per end after first one:

56–As per sketch No. 1.....

57–As per sketch No. 3.....

4M454–21 Welded (new rounded end). **Rate**.....

Includes welding stock on throttle lever fulcrum link end, dressing and finishing end complete.

Forge:

60–Per first rounded end.....

61–Per rounded end after first one.....

BOILER MOUNTINGS

Throttle Lever Fulcrum Link

Throttle

LEVER FULCRUM LINK—END, JAW

4M456–13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, throttle lever fulcrum link jaw end.

Forge.

Per first jaw end:

1–As per sketch No. 1 .....

2–As per sketch No. 3 .....

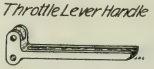
Per jaw end after first one:

3–As per sketch No. 1 .....

4–As per sketch No. 3 .....

Throttle

LEVER HANDLE



4M466–13 Made complete. **Rate**.....

Includes getting material for throttle lever handle, blocking out, forging, dressing and finishing complete.

Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

4M466–18 Straightened. **Rate**.....

Includes straightening old throttle lever handle when same has become bent or twisted.

Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

4M466–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever handle, dressing and finishing over weld complete.

Forge:

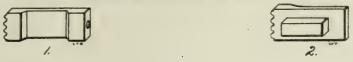
1–Per first hole..... .....
2–Per hole after first one..... .....

BOILER MOUNTINGS

Throttle Lever Handle

Throttle
LEVER LATCH

Throttle Lever Latches



Throttle Lever Latches



4M476–0 Annealed. **Rate**.....

Includes annealing throttle lever latch.

Per first latch:

1–When annealed at forge.....
2–When annealed at case-hardening furnace.....

Per latch after first one:

5–When annealed at forge.....
6–When annealed at case-hardening furnace.....

4M476–5 Case-hardened. **Rate**.....

Includes case-hardening throttle lever latch complete.

Per first latch:

1–When case-hardened at forge.....
2–When case-hardened at case-hardening furnace without box.....
3–When case-hardened at case-hardening furnace with box, ...

Per latch after first one:

7–When case-hardened at forge.....
8–When case-hardened at case-hardening furnace without box.....
9–When case-hardened at case-hardening furnace with box, ...

Throttle

LEVER LATCH

4M476–13 Made. **Rate**.....

Includes getting material for throttle lever latch, blocking out, forging, dressing and finishing complete.

Steam hammer.

Per first latch:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per latch after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

Forge.

Per first latch:

14–As per sketch No. 1 .....
15–As per sketch No. 2 .....
16–As per sketch No. 3 .....
17–As per sketch No. 4 .....

Per latch after first one:

20–As per sketch No. 1 .....
21–As per sketch No. 2 .....
22–As per sketch No. 3 .....
23–As per sketch No. 4 .....

4M476–18 Straightened. **Rate**.....

Includes straightening old throttle lever latch when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per place repaired after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....

BOILER MOUNTINGS

Throttle Lever Latch

Throttle

LEVER LATCH

4M476–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever latch, dressing and finishing over weld complete.

Forge.

Per first hole:

1–As per sketch No. 2..... .....
2–As per sketch No. 4..... .....

Per hole after first one:

5–As per sketch No. 2..... .....
6–As per sketch No. 4..... .....

Throttle

LEVER LATCH BOX

Throttle Lever Latch Box



4M478–0 Annealed. **Rate**.....

Includes annealing throttle lever latch box.

Per first latch box:

1–When annealed at forge..... .....
2–When annealed at case-hardening furnace..... .....

Per latch box after first one:

5–When annealed at forge..... .....
6–When annealed at case-hardening furnace..... .....

4M478–5 Case-hardened. **Rate**.....

Includes case-hardening throttle lever latch box.

Per first latch box:

1–When case-hardened at forge..... .....
2–When case-hardened at case-hardening furnace without box..... .....
3–When case-hardened at case-hardening furnace with box, ...

Per latch box after first one:

7–When case-hardened at forge..... .....
8–When case-hardened at case-hardening furnace without box..... .....
9–When case-hardened at case-hardening furnace with box, ...

4M478–13 Made. **Rate**.....

Includes getting material for throttle lever latch box, blocking out, forging, dressing and finishing complete.

Forge.

Per first box:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per box after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER MOUNTINGS

Throttle Lever Latch Box

Throttle
LEVER LATCH BOX

4M478–18 Straightened. **Rate**.....

Includes straightening old throttle lever latch box when same has become bent.

Forge.

Per latch box repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per latch box repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M478–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever latch box, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M478–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever latch box, dressing and finishing over weld complete.

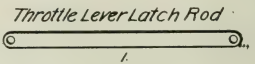
Forge:

10–Per first hole plugged .....

11–Per hole plugged after first one .....

Throttle

LEVER LATCH ROD



4M490–2 Bend changed. **Rate**.....

Includes changing bend in throttle lever latch rod.

Forge.

Per first rod:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per rod after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M490–4 Cut—Iron. **Rate**.....

Includes cutting iron for throttle lever latch rod at power shears.

Power shears:

1–Per rod..... .....

4M490–4 Cut and ground. **Rate**.....

Includes cutting iron for throttle lever latch rod at power shears, grinding ends of same at emery wheel.

Power shears and emery wheel:

5–Per first rod..... .....
6–Per rod after first one..... .....

BOILER MOUNTINGS

Throttle Lever Latch Rod

Throttle

LEVER LATCH ROD

4M490–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening throttle lever latch rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per rod after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M490–13 Made. **Rate**.....

Includes getting material for throttle lever latch rod, forging, dressing and finishing complete.

Forge.

Per first rod:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per rod after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M490–18 Straightened. **Rate**.....

Includes straightening old throttle lever latch rod when same has become bent.

Forge.

Per first place repaired:

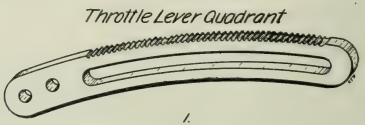
1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

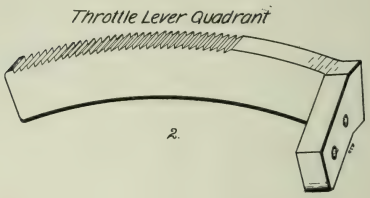
5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Throttle

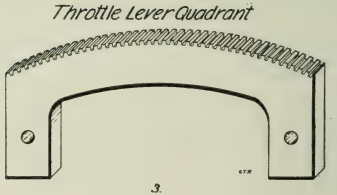
LEVER QUADRANT



1.



2.



3.

4M500–0 Annealed. **Rate**.....

Includes annealing throttle lever quadrant complete.

Per first quadrant:

1–When annealed at forge..... .....
2–When annealed at case-hardening furnace..... .....

Per quadrant after first one:

5–When annealed at forge..... .....
6–When annealed at case-hardening furnace..... .....

BOILER MOUNTINGS

Throttle Lever Quadrant

Throttle

LEVER QUADRANT

4M500–5 Case-hardened. **Rate**.....

Includes case-hardening throttle lever quadrant complete.

Per first quadrant:

1–When case-hardened at forge.....

2–When case-hardened at case-hardening furnace without box.....

3–When case-hardened at case-hardening furnace with box,.....

Per quadrant after first one:

7–When case-hardened at forge.....

8–When case-hardened at case-hardening furnace without box.....

9–When case-hardened at case-hardening furnace with box,.....

4M500–13 Made. **Rate**.....

Includes getting material for throttle lever quadrant, blocking out, forging, dressing and finishing complete.

Forge.

Per first quadrant:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

3–As per sketch No. 3.....

Per quadrant after first one:

7–As per sketch No. 1.....

8–As per sketch No. 2.....

9–As per sketch No. 3.....

4M500–18 Straightened. **Rate**.....

Includes straightening old throttle lever quadrant when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

3–As per sketch No. 3.....

Per place repaired after first one:

7–As per sketch No. 1.....

8–As per sketch No. 2.....

9–As per sketch No. 3.....

Throttle

LEVER QUADRANT

4M500–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever quadrant, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M500–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever quadrant, dressing and finishing over weld complete.

Forge.

Per first hole:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per hole after first one:

16–As per sketch No. 1 .....
17–As per sketch No. 2 .....
18–As per sketch No. 3 .....

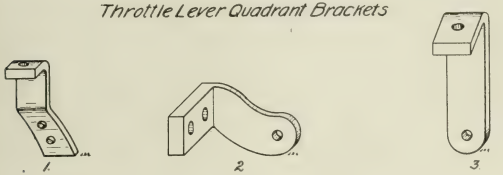
BOILER MOUNTINGS

Throttle Lever Quadrant

Throttle

LEVER QUADRANT, BRACKET

Throttle Lever Quadrant Brackets



4M502-2 Bend changed. **Rate**.....

Includes changing bend in throttle lever quadrant bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bend changed after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M502-13 Made. **Rate**.....

Includes getting material for throttle lever quadrant bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bracket after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Throttle

LEVER QUADRANT, BRACKET

4M502–18 Straightened. **Rate**.....

Includes straightening old throttle lever quadrant bracket when same has become bent or twisted.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4M502–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever quadrant bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4M502–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever quadrant bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

15–As per sketch No. 1.....
16–As per sketch No. 2.....
17–As per sketch No. 3.....

Per hole after first one:

21–As per sketch No. 1.....
22–As per sketch No. 2.....
23–As per sketch No. 3.....

BOILER MOUNTINGS

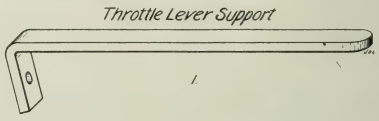
Throttle Lever Quadrant Bracket

Throttle
LEVER STEM

4M516 See schedules for Throttle Stem, under Steam and Dry Pipes.

Throttle

LEVER SUPPORT





4M518–12 Lengthened or shortened. **Rate** .....

Includes lengthening or shortening throttle lever support by drawing out or upsetting same.

Forge.

Per first support:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per support after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M518–13 Made. **Rate** .....

Includes getting material for throttle lever support, forging, bending, dressing and finishing complete.

Forge.

Per first support:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per support after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

BOILER MOUNTINGS

Throttle Lever Support

Throttle

LEVER SUPPORT

4M518–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in throttle lever support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4M518–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in throttle lever support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per place repaired after first one:

16–As per sketch No. 1..... .....
17–As per sketch No. 2..... .....

4M518–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in throttle lever support, dressing and finishing over weld complete.

Forge.

Per first hole:

22–As per sketch No. 1..... .....
23–As per sketch No. 2..... .....

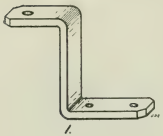
Per hole after first one:

28–As per sketch No. 1..... .....
29–As per sketch No. 2..... .....

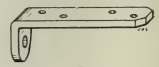
Wheel

COVER BRACKET

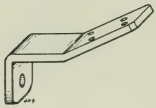
Wheel Cover Brackets.

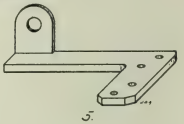






Wheel Cover Brackets.





4M550–2 Bend changed. **Rate**.....

Includes changing bend in wheel cover bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....

Per bend changed after first one:

8–As per sketch No. 1.....
9–As per sketch No. 2.....
10–As per sketch No. 3.....
11–As per sketch No. 4.....
12–As per sketch No. 5.....

4M550–4 Cut—Iron. **Rate**.....

Includes cutting iron for wheel cover bracket at power shears.

Power shears:

1–Per piece cut.....

BOILER MOUNTINGS

Wheel Cover Bracket

Wheel

COVER BRACKET

4M550–13 Made. **Rate**.....

Includes getting material for wheel cover bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....

Per bracket after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....

4M550–18 Straightened. **Rate**.....

Includes straightening old wheel cover bracket when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....

Per place repaired after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....

Wheel

COVER BRACKET

4M550–21 Welded (crack). **Rate**

Includes making dutchman, welding same in crack in wheel cover bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....

Per place repaired after first one:

10–As per sketch No. 1 .....
11–As per sketch No 2 .....
12–As per sketch No. 3 .....
13–As per sketch No. 4 .....
14–As per sketch No. 5 .....

4M550–21 Welded (holes plugged). **Rate**

Includes making plug, welding same in hole in wheel cover bracket, dressing and finishing over weld complete.

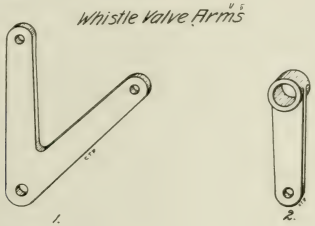
Forge:

20–Per first hole .....
21–Per hole after first one .....

BOILER MOUNTINGS

Wheel Cover Bracket

Whistle
VALVE ARM



4M560–2 Bend changed. **Rate**

Includes changing bend in whistle valve arms.

Forge.
Per bend:
1–As per sketch No. 1

4M560–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening whistle valve arm by drawing out or upsetting same.

Forge.
Per first arm:
1–As per sketch No. 1
2–As per sketch No. 2
Per arm after first one:
5–As per sketch No. 1
6–As per sketch No. 2

4M560–13 Made complete. **Rate**

Includes getting material for whistle valve arm, blocking out, forging, dressing and finishing complete.

Forge.
Per first arm:
1–As per sketch No. 1
2–As per sketch No. 2
Per arm after first one:
5–As per sketch No. 1
6–As per sketch No. 2

Whistle

VALVE ARM

4M560–18 Straightened. **Rate**.....

Includes straightening old whistle valve arm when same has become bent or twisted.

Forge:

1–Per first arm.....

2–Per arm after first one.....

4M560–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in whistle valve arm, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per place repaired after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4M560–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in whistle valve arm, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1.....

11–As per sketch No. 2.....

Per place repaired after first one:

15–As per sketch No. 1.....

16–As per sketch No. 2.....

4M560–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in whistle valve arm, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1.....

21–As per sketch No. 2, flat end.....

22–As per sketch No. 2, boss end.....

Per hole after first one:

26–As per sketch No. 1.....

27–As per sketch No. 2, flat end.....

28–As per sketch No. 2, boss end.....

BOILER MOUNTINGS

Whistle Valve Arm

Whistle

VALVE ARM

4M560–21 Welded (new end). **Rate**.....

Includes getting material, welding necessary stock on end of whistle valve arm, dressing and finishing end complete.

Forge:

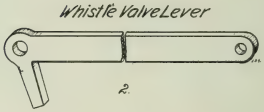
30–Per first end..... .....

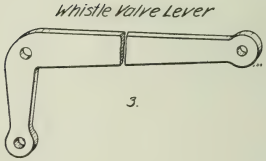
31–Per end after first one..... .....

Whistle

VALVE LEVER







4M564–2 Bend changed. **Rate**.....

Includes changing bend in whistle valve lever.

Forge.

Per first bend changed:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per bend changed after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

BOILER MOUNTINGS

Whistle Valve Lever

Whistle

VALVE LEVER

4M564–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening whistle valve lever by drawing out or upsetting same.

Forge.

Per first place lengthened or shortened:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place lengthened or shortened after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M564–13 Made. **Rate**.....

Includes getting material for whistle valve lever, forging, bending, dressing and finishing complete.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per lever after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....

4M564–18 Straightened. **Rate**.....

Includes straightening old whistle valve lever when same has become bent or twisted.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Whistle

VALVE LEVER

4M564–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in whistle valve lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4M564–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in whistle valve lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per place repaired after first one:

17–As per sketch No. 1 .....
18–As per sketch No. 2 .....
19–As per sketch No. 3 .....

4M564–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in whistle valve lever, dressing and finishing over weld complete.

Forge.

Per first hole:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....

Per hole after first one:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3 .....

BOILER MOUNTINGS

Whistle Valve Lever

Whistle

VALVE LEVER

4M564–21 Welded (new rounded ends). **Rate**.....

Includes welding new stock on rounded ends of old whistle valve lever, dressing and finishing to shape complete.

Forge.

Per first end:

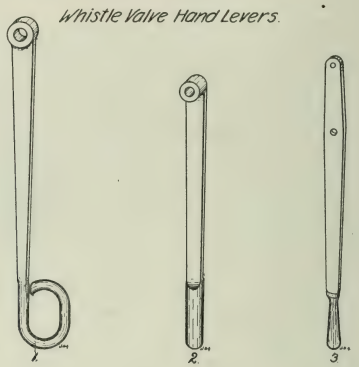
37–As per sketch No. 1..... .....
38–As per sketch No. 2..... .....
39–As per sketch No. 3..... .....

Per end after first one:

45–As per sketch No. 1..... .....
46–As per sketch No. 2..... .....
47–As per sketch No. 3..... .....

Whistle

VALVE—LEVER, HAND



4M566–6 Dressed. **Rate**.....

Includes dressing and finishing whistle valve hand lever complete after same has been forged.

Forge.

Per first lever:

1–As per sketch No. 1. ....
2–As per sketch No. 2. ....
3–As per sketch No. 3. ....

Per lever after first one:

7–As per sketch No. 1. ....
8–As per sketch No. 2. ....
9–As per sketch No. 3. ....

4M566–9 Forged. **Rate**.....

Includes getting material, blocking out and forging whistle valve hand lever complete, ready for dressing.

Steam hammer.

Per first lever:

1–As per sketch No. 1. ....
2–As per sketch No. 2. ....
3–As per sketch No. 3. ....

BOILER MOUNTINGS

Whistle Valve Hand Lever

Whistle

VALVE—LEVER, HAND

Per lever after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Forge.

Per first lever:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per lever after first one:

17–As per sketch No. 1 .....
18–As per sketch No. 2 .....
19–As per sketch No. 3 .....

4M566–9 Forged and dressed. **Rate**.....

Includes getting material for whistle valve hand lever, blocking out, forging, dressing and finishing complete.

Forge.

Per first lever:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....

Per lever after first one:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3 .....

4M566–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening whistle valve hand lever when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Whistle

VALVE—LEVER, HAND

4M566–18 Straightened. **Rate**.....

Includes straightening old whistle valve hand lever when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4M566–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in whistle valve hand lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4M566–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in whistle valve hand lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1.....
13–As per sketch No. 2.....
14–As per sketch No. 3.....

Per place repaired after first one:

17–As per sketch No. 1.....
18–As per sketch No. 2.....
19–As per sketch No. 3.....

BOILER MOUNTINGS

Whistle Valve Hand Lever

Whistle

VALVE—LEVER, HAND

4M566–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in whistle valve hand lever, dressing and finishing over weld complete.

Forge.

Per first hole:

22–As per sketch No. 1.....
23–As per sketch No. 2.....
24–As per sketch No. 3.....

Per hole after first one:

27–As per sketch No. 1.....
28–As per sketch No. 2.....
29–As per sketch No. 3.....

4M566–21 Welded (new end). **Rate**.....

Includes making and welding new stock on end of old whistle valve hand lever, dressing and finishing end to shape complete.

Forge.

Per first end:

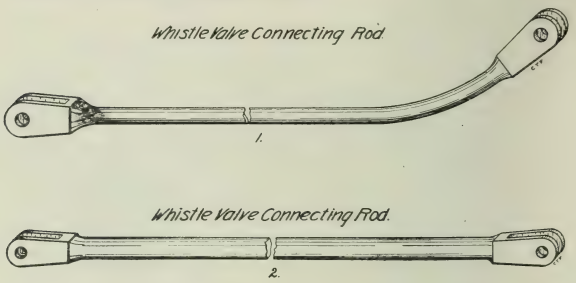
35–As per sketch No. 1, (top end).....
36–As per sketch No. 1, (bottom end).....
37–As per sketch No. 2, (top end).....
38–As per sketch No. 2, (bottom end).....
39–As per sketch No. 3, (top end).....
40–As per sketch No. 3, (bottom end).....

Per end after first one:

45–As per sketch No. 1, (top end).....
46–As per sketch No. 1, (bottom end).....
47–As per sketch No. 2, (top end).....
48–As per sketch No. 2, (bottom end).....
49–As per sketch No. 3, (top end).....
50–As per sketch No. 3, (bottom end).....

Whistle

VALVE—ROD, CONNECTING



4M570–2 Bend changed. **Rate**.....

Includes changing bend in whistle valve connecting rod.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....

Per bend changed after first one:

5–As per sketch No. 1..... .....

4M570–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening whistle valve connecting rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1..... .....

2–As per sketch No. 2..... .....

Per rod after first one:

5–As per sketch No. 1..... .....

6–As per sketch No. 2..... .....

BOILER MOUNTINGS

Whistle Valve Connecting Rod

Whistle

VALVE—ROD, CONNECTING

4M570–13 Made. **Rate**

Includes getting material for whistle valve connecting rod, blocking out, forging, cutting jaws, dressing and finishing complete.

Forge.

Per first connecting rod:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per connecting rod after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M570–18 Straightened. **Rate**

Includes straightening old whistle valve connecting rod when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4M570–21 Welded (break). **Rate**

Includes doing necessary scarfing, welding break in whistle valve connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per place repaired after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

Whistle

VALVE—ROD, CONNECTING

4M570–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in whistle valve connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1 .....

11–As per sketch No. 2 .....

Per place repaired after first one:

15–As per sketch No. 1 .....

16–As per sketch No. 2 .....

4M570–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in whistle valve connecting rod, dressing and finishing over weld complete.

Forge:

18–Per first hole .....

19–Per hole after first one .....

BOILER MOUNTINGS

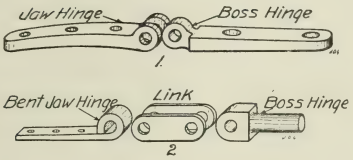
Whistle Valve Connecting Rod

CAB AND WOOD WORK

CAB AND WOOD WORK

Apron

HINGE



4N10-13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing apron hinge complete.

Forge.
Per first hinge.
As per sketch No. 1:
1–Jaw hinge.....
2–Boss hinge.....
As per sketch No. 2:
5–Bent hinge.....
6–Boss hinge.....
Per hinge after first one:
As per sketch No. 1:
10–Jaw hinge.....
11–Boss hinge.....
As per sketch No. 2:
15–Bent hinge.....
16–Boss hinge.....

4N10-18 Straightened. **Rate**.....

Includes straightening old apron hinge when same has become bent or twisted.

Forge.
Per first hinge.
As per sketch No. 1:
1–Jaw hinge.....
2–Boss hinge.....

Apron

HINGE

As per sketch No. 2:
5–Bent hinge.....
6–Boss hinge.....

Per hinge after first one.
As per sketch No. 1:
10–Jaw hinge.....
11–Boss hinge.....

As per sketch No. 2:
15–Bent hinge.....
16–Boss hinge.....

4N10–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in apron hinge, dressing and finishing over weld complete.

Forge.
Per first place repaired.
As per sketch No. 1:
1–Jaw hinge.....
2–Boss hinge.....

As per sketch No. 2:
5–Bent hinge.....
6–Boss hinge.....

Per place repaired after first one.
As per sketch No. 1:
10–Jaw hinge.....
11–Boss hinge.....

As per sketch No. 2:
15–Bent hinge.....
16–Boss hinge.....

4N10–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in apron hinge, dressing and finishing over weld complete.

Forge.
Per first place repaired.
As per sketch No. 1:
20–Jaw hinge.....
21–Boss hinge.....

As per sketch No. 2:
25–Bent hinge.....
26–Boss hinge.....

CAB AND WOOD WORK

Apron Hinge

Apron

HINGE

Per place repaired after first one.

As per sketch No. 1:

30–Jaw hinge .....

31–Boss hinge .....

As per sketch No. 2:

35–Bent hinge .....

36–Boss hinge .....

4N10–21 Welded (holes plugged). **Rate** .....

Includes making plug, welding same in hole in apron hinge, dressing and finishing over weld complete.

Forge.

Per first hole plugged.

As per sketch No. 1:

1–Jaw hinge .....

2–Boss hinge .....

As per sketch No. 2:

5–Bent hinge .....

6–Boss hinge .....

Per hole plugged after first one.

As per sketch No. 1:

10–Jaw hinge .....

11–Boss hinge .....

As per sketch No. 2:

15–Bent hinge .....

16–Boss hinge .....

Apron

HINGE LINK

4N14–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing apron hinge link complete.

Forge.

Per first link:

1–As per sketch No. 2..... .....

Per link after first one:

5–As per sketch No. 2..... .....

4N14–18 Straightened. **Rate**.....

Includes straightening old apron hinge link when same has become bent.

Forge.

Per first link:

1–As per sketch No. 2..... .....

Per link after first one:

5–As per sketch No. 2..... .....

4N14–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in apron hinge link, dressing and finishing over weld complete.

Forge:

1–Per first hole plugged..... .....

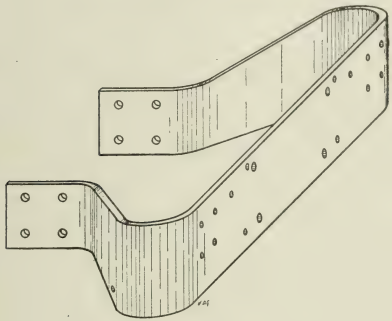
2–Per hole plugged after first one..... .....

CAB AND WOOD WORK

Apron Hinge Link

Bumper, Front (or Pilot Beam)
BAND

Pilot Beam Band.



4N20–2 Bend changed. **Rate**.....

Includes changing bend in front bumper band.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4N20–6 Dressed. **Rate**.....

Includes bending, dressing and finishing complete, front bumper band after same has been forged.

Forge:

1–Per first bend..... .....
2–Per band after first one..... .....

4N20–9 Forged. **Rate**.....

Includes getting material, blocking out and forging front bumper band complete, ready for bending and dressing.

Steam hammer:

1–Per first band..... .....
2–Per band after first one..... .....

Bumper, Front (or Pilot Beam)

BAND

4N20–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening front bumper band by drawing out or upsetting same.

Forge:

1–Per first band..... .....
2–Per band after first one..... .....

4N20–18 Straightened. **Rate**.....

Includes straightening old front bumper band when same has become bent or twisted.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N20–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in front bumper band, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N20–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in front bumper band, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4N20–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in front bumper band, dressing and finishing over weld complete.

Forge:

10–Per first hole plugged..... .....
11–Per hole plugged after first one..... .....

4N20–21 Welded (new end). **Rate**.....

Includes getting new front bumper band end after same has been forged, doing necessary scarfing, welding to old band, dressing, welding and finishing to shape complete.

Forge:

15–Per first end..... .....
16–Per end after first one..... .....

CAB AND WOOD WORK

Bumper, Front (or Pilot Beam)—Band

Bumper, Front (or Pilot Beam)
BAND, END

4N22–9 Forged. **Rate**.....

Includes getting material, blocking out and forging end for front bumper band complete, ready for welding to band.

Steam hammer:

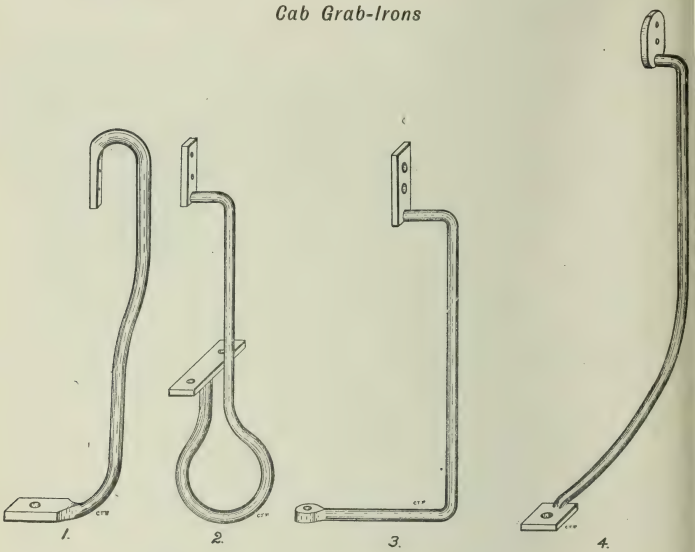
1–Per first end..... .....

2–Per end after first one..... .....

Cab

GRAB-IRON

Cab Grab-Irons



4N30–2 Bend changed and fit. **Rate**.....

Includes changing bend in cab grab-iron and fitting same to cab.

Forge.

Per first grab-iron changed:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per grab-iron changed after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

CAB AND WOOD WORK

Cab Grab-iron

Cab

GRAB-IRON

4N30–12 Lengthened or shortened. Rate.....

Includes lengthening or shortening cab grab-iron by drawing out or upsetting same and fitting grab-iron to cab.

Forge.

Per first grab-iron:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per grab-iron after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

4N30–13 Made. Rate.....

Includes getting material, forging, welding, dressing, fitting grab-iron to cab, and finishing cab grab-iron complete.

Forge.

Per first grab-iron:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per grab-iron after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

4N30–18 Straightened. Rate.....

Includes straightening old cab grab-iron when same has become bent or twisted and fitting to cab.

Forge.

Per first grab-iron:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per grab-iron after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

Cab

GRAB-IRON

4N30–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in cab grab-iron, dressing and finishing over weld complete, and fitting grab-iron to cab.

Forge.

Per first grab-iron repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per grab-iron repaired after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

4N30–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in cab grab-iron, dressing and finishing over weld complete, and fitting grab-iron to cab.

Forge.

Per first grab-iron repaired:

20–As per sketch No. 1.....
21–As per sketch No. 2.....
22–As per sketch No. 3.....
23–As per sketch No. 4.....

Per grab-iron repaired after first one:

28–As per sketch No. 1.....
29–As per sketch No. 2.....
30–As per sketch No. 3.....
31–As per sketch No. 4.....

4N30–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in end of cab grab-iron, dressing and finishing over weld complete, and fitting grab-iron to cab.

Forge.

Per first hole:

36–As per sketch No. 1.....
37–As per sketch No. 2.....
38–As per sketch No. 3.....
39–As per sketch No. 4.....

Per hole after first one in the same grab-iron:

42–As per sketch No. 1.....
43–As per sketch No. 2.....
44–As per sketch No. 3.....
45–As per sketch No. 4.....

CAB AND WOOD WORK

Cab Grab-iron

Cab

GRAB-IRON

4N30-21 Welded (new ends). **Rate**.....

Includes getting material, making end, welding same to grab-iron, dressing and finishing end complete, and fitting grab-iron to cab.

Forge.

Per first end:

50–As per sketch No. 1, top end.....
51–As per sketch No. 1, bottom end.....
52–As per sketch No. 2, top end.....
53–As per sketch No. 2, bottom end.....
54–As per sketch No. 3, top end.....
55–As per sketch No. 3, bottom end.....
56–As per sketch No. 4, top end.....
57–As per sketch No. 4, bottom end.....

Per end after first one:

60–As per sketch No. 1, top end.....
61–As per sketch No. 1, bottom end.....
62–As per sketch No. 2, top end.....
63–As per sketch No. 2, bottom end.....
64–As per sketch No. 3, top end.....
65–As per sketch No. 3, bottom end.....
66–As per sketch No. 4, top end.....
67–As per sketch No. 4, bottom end.....

Cab

SEAT SUPPORT

Cab Seat Support



4N36–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening cab seat support by drawing out or upsetting same.

Forge:

1–Per first support.....

2–Per support after first one.....

4N36–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing complete, cab seat support.

Forge:

1–Per first support.....

2–Per support after first one.....

4N36–18 Straightened. **Rate**.....

Includes straightening old cab seat support when same has become bent.

Forge:

1–Per first support.....

2–Per support after first one.....

4N36–21 Welded (break). **Rate**.....

Includes doing necessary scarfing in cab seat support, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

CAB AND WOOD WORK

Cab Seat Support

Cab

SEAT SUPPORT HINGE

Cab Seat Support Hinge



4N38–13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing cab seat support hinge complete.

Forge:

1–Per first hinge..... .....
2–Per hinge after first one..... .....

4N38–18 Straightened. **Rate**.....

Includes straightening old cab seat support hinge when same has become bent.

Forge:

1–Per first hinge..... .....
2–Per hinge after first one..... .....

4N38–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in cab seat support hinge, dressing and finishing over weld complete.

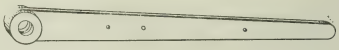
Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Cab

VENTILATOR—LEVER, OPERATING

Cab Ventilator Operating Lever



4N50–6 Dressed. **Rate**.....

Includes dressing and finishing cab ventilator operating lever complete, after same has been forged.

Forge:
1–Per first lever.....
2–Per lever after first one.....

4N50–9 Forged. **Rate**.....

Includes getting material, blocking out, forging cab ventilator operating lever complete, ready for dressing.

Steam hammer:
1–Per first lever.....
2–Per lever after first one.....

Forge:
5–Per first lever.....
6–Per lever after first one.....

4N50–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing cab ventilator operating lever complete.

Forge:
10–Per first lever.....
11–Per lever after first one.....

4N50–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening cab ventilator operating lever by drawing out or upsetting same.

Forge:
1–Per first lever.....
2–Per lever after first one.....

CAB AND WOOD WORK

Cab Ventilator—Operating Lever

Cab

VENTILATOR—LEVER, OPERATING

4N50–18 Straightened. **Rate**.....

Includes straightening old cab ventilator operating lever when same has become bent.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4N50–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in cab ventilator operating lever, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N50–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in cab ventilator operating lever, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4N50–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in boss end of cab ventilator operating lever, dressing and finishing over weld complete.

Forge:

10–Per first end..... .....
11–Per end after first one..... .....

Cab

VENTILATOR LOCK BRACKET

Cab Ventilator Lock Bracket



4N54–12 Lengthened or shortened. **Rate** .....

Includes lengthening or shortening cab ventilator lock bracket by drawing out or upsetting same.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4N54–13 Made. **Rate** .....

Includes getting material, forging, bending, dressing and finishing cab ventilator lock bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4N54–18 Straightened. **Rate** .....

Includes straightening old cab ventilator lock bracket when same has become bent.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4N54–21 Welded (break). **Rate** .....

Includes doing necessary scarfing, welding break in cab ventilator lock bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

CAB AND WOOD WORK

Cab Ventilator Lock Bracket

Cab

VENTILATOR LOCK BRACKET

4N54–21 Welded (crack). **Rate** .....

Includes making dutchman, welding same in crack in cab ventilator lock bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4N54–21 Welded (holes plugged). **Rate** .....

Includes making plug, welding same in hole in cab ventilator lock bracket, dressing and finishing over weld complete.

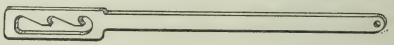
Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

Cab

VENTILATOR LOCK HOOK

Cab Ventilator Lock Hook



4N60–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening cab ventilator lock hook by drawing out or upsetting same.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4N60–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing cab ventilator lock hook complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4N60–18 Straightened. **Rate**.....

Includes straightening old cab ventilator lock hook when same has become bent.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4N60–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in cab ventilator lock hook, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N60–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in cab ventilator lock hook, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

CAB AND WOOD WORK

Cab Ventilator Lock Hook

Cab

VENTILATOR—SHAFT, OPERATING—ARM

Cab Ventilator Shaft Arm



4N68–6 Dressed. **Rate**.....

Includes dressing and finishing cab ventilator operating shaft arm complete, after same has been forged.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4N68–9 Forged. **Rate**.....

Includes getting material for cab ventilator operating shaft arm, blocking out, forging complete, ready for dressing.

Steam hammer:

1–Per first arm..... .....
2–Per arm after first one..... .....

Forge:

3–Per first arm..... .....
4–Per arm after first one..... .....

4N68–9 Forged and dressed. **Rate**.....

Includes getting material for cab ventilator operating shaft arm, blocking out, forging, dressing and finishing complete.

Forge:

7–Per first arm..... .....
8–Per arm after first one..... .....

4N68–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening cab ventilator operating shaft arm by drawing out or upsetting same

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

Cab

VENTILATOR—SHAFT, OPERATING—ARM

4N68–18 Straightened. **Rate**.....

Includes straightening old cab ventilator operating shaft arm when same has become bent.

Forge:

1–Per first arm.....

2–Per arm after first one.....

4N68–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in cab ventilator operating shaft arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4N68–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in cab ventilator operating shaft arm, dressing and finishing over weld complete.

Forge:

5–Per first place repaired.....

6–Per place repaired after first one.....

4N68–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in cab ventilator operating shaft arm, dressing and finishing over weld complete.

Forge.

Per first hole:

10–In jaw end.....

11–In boss end.....

Per hole after first one:

15–In jaw end.....

16–In boss end.....

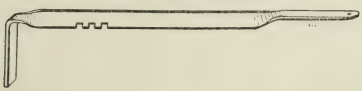
CAB AND WOOD WORK

Cab Ventilator Operating Shaft Arm

Cab

WINDOW—ROD, ADJUSTING

Cab Window Adjusting Rod



4N76–2 Bend changed. **Rate**.....

Includes changing bend in cab window adjusting rod.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4N76–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening cab window adjusting rod by drawing out or upsetting same.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4N76–13 Made complete. **Rate**.....

Includes getting material, forging, bending, dressing and finishing cab window adjusting rod complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4N76–18 Straightened. **Rate**.....

Includes straightening old cab window adjusting rod when same has become bent.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4N76–21 Welded (break). **Rate**.....

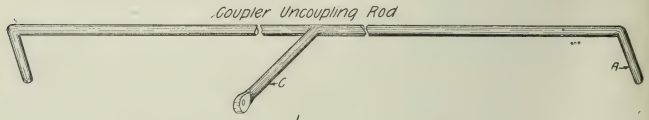
Includes doing necessary scarfing and welding break in cab window adjusting rod.

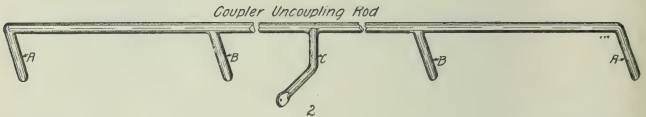
Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Coupler

ROD, UNCOUPLING





4N90–2 Bent. **Rate**

Includes getting material and making bends in coupler upcoupling rod.

Forge.

Per first rod:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per rod after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

4N90–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening coupler uncoupling rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per rod after first one:

5–As per sketch No. 1 .....

6–As per sketch No. 2 .....

CAB AND WOOD WORK

Coupler Uncoupling Rod

Coupler

ROD, UNCOUPLING

4N90–13 Made. **Rate**.....

Includes getting material for uncoupling rod, forging, dressing rod and arms, doing necessary scarfing and welding, and finishing rod complete.

Forge.

Per first rod:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per rod after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4N90–18 Straightened. **Rate**.....

Includes straightening old coupler uncoupling rod and arms complete when same have become bent or twisted.

Forge.

Per first rod:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

Per rod after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

4N90–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in coupler upcoupling rod or arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4N90–21 Welded and dressed (arms). **Rate**.....

Includes doing necessary scarfing, welding arms on coupler uncoupling rod, dressing and finishing complete.

Forge.

Per first arm welded on:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

Per arm welded on after first one:

8–As per sketch No. 1.....

9–As per sketch No. 2.....

Coupler

ROD, UNCOUPLING—ARM

4N92–2 Bend or offset changed. **Rate**

Includes changing bend or offset in coupler uncoupling rod arm.

Forge.

Per first arm:

1–As per sketch No. 1

3–As per sketch No. 2

Per arm after first one:

5–As per sketch No. 1

7–As per sketch No. 2

4N92–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening coupler uncoupling rod arm by drawing out or upsetting same.

Forge.

Per first arm:

1–As per sketch No. 1

3–As per sketch No. 2

Per arm after first one:

5–As per sketch No. 1

7–As per sketch No. 2

4N92–18 Straightened. **Rate**

Includes straightening old coupler uncoupling rod arm when same has become bent.

Forge.

Per first arm:

1–As per sketch No. 1

3–As per sketch No. 2

Per arm after first one:

5–As per sketch No. 1

7–As per sketch No. 2

CAB AND WOOD WORK

Coupling Uncoupling Rod Arm

Coupler

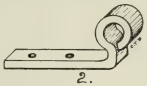
ROD, UNCOUPLING—BRACKET

Coupler Uncoupling Rod Bracket



1.

Coupler Uncoupling Rod Bracket



2.



3

4N96–2 Bend changed. **Rate**

Includes changing bend in coupler uncoupling rod bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1

2–As per sketch No. 2

Per bend changed after first one:

5–As per sketch No. 1

6–As per sketch No. 2

4N96–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening coupler uncoupling rod bracket.

Forge.

Per first bracket:

1–As per sketch No. 1

2–As per sketch No. 2

Per bracket after first one:

5–As per sketch No. 1

6–As per sketch No. 2

Coupler

ROD, UNCOUPLING—BRACKET

4N96–13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing complete, coupler uncoupling rod bracket and applying same to rod.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bracket after first one:

5–As per sketch No. 1 .....
6–As per sketch No. 2 .....
7–As per sketch No. 3 .....

4N96–18 Straightened. **Rate**.....

Includes straightening old coupler uncoupling rod bracket after same has become bent.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....

Per bracket after first one:

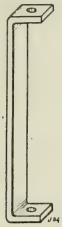
5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

CAB AND WOOD WORK

Coupler Uncoupling Rod Bracket

Deck
SUPPORT

Engine Deck Support



4N100-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening deck support by drawing out or upsetting same.

Forge:
1–Per first support..... .....
2–Per support after first one..... .....

4N100-13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing deck support complete.

Forge:
1–Per first support..... .....
2–Per support after first one..... .....

4N100-18 Straightened. **Rate**.....

Includes straightening old deck support when same has become bent or twisted.

Forge:
1–Per first support..... .....
2–Per support after first one..... .....

4N100-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in deck support, dressing and finishing over weld complete.

Forge:
1–Per first support..... .....
2–Per support after first one..... .....

Deck

SUPPORT

4N100–21 Welded (crack). **Rate**

Includes making dutchman, welding same in crack in deck support, dressing and finishing over weld complete.

Forge:

5–Per first place repaired

6–Per place repaired after first one

4N100–21 Welded (holes plugged). **Rate**

Includes making plug, welding same in hole in deck support, dressing and finishing over weld complete.

Forge:

10–Per first hole

11–Per hole after first one

CAB AND WOOD WORK

Deck Support

Pilot

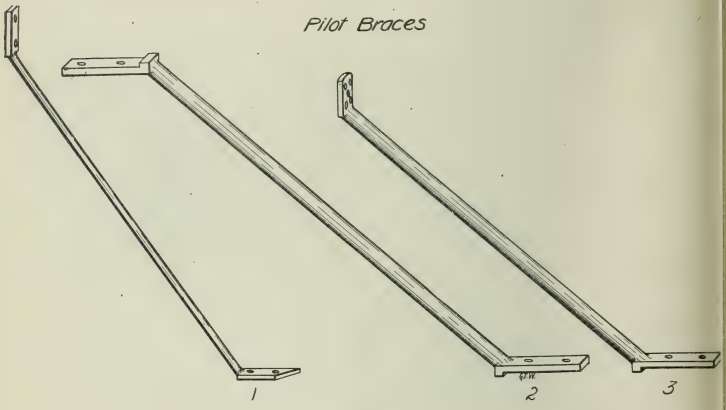
BEAM BAND

4N200.

For operations on Pilot Beam Band, see Schedule No. 4N20, under Front Bumper Band.

Pilot

BEAM BRACE



4N202–2 Bend changed. **Rate**.....

Includes going to engine, getting measurements, changing set in foot of pilot beam brace, and fitting up brace comp ete.

Forge.

Per first brace:

1–As per sketch No. 1.....

2–As per sketch No. 2.....

3–As per sketch No. 3.....

Per brace after first one:

5–As per sketch No. 1.....

6–As per sketch No. 2.....

7–As per sketch No. 3.....

CAB AND WOOD WORK

Pilot Beam Brace

Pilot

BEAM BRACE

4N202–2 Bend changed (when brace is changed in length). Rate.....

Same as schedules 4N202–2–1 to 4N202–2–7, but including changing length of pilot beam brace by drawing out or upsetting same.

Forge.

Per first brace:

10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 3 .....

Per brace after first one:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....

4N202–2 Bend changed (including shortening by welding). Rate.....

Same as schedule 4N202–2–1 to 4N202–2–7, but including shortening pilot beam brace by cutting out stock and welding parts together complete.

Forge.

Per first brace:

20–As per sketch No. 1 .....
21–As per sketch No. 2 .....
22–As per sketch No. 3 .....

Per brace after first one:

26–As per sketch No. 1 .....
27–As per sketch No. 2 .....
28–As per sketch No. 3 .....

4N202–2 Bend changed (including lengthening by welding). Rate.....

Same as schedule 4N202–2–1 to 4N202–2–7, but including lengthening pilot beam brace by welding in required new stock, dressing and finishing brace complete.

Forge.

Per first brace:

31–As per sketch No. 1 .....
32–As per sketch No. 2 .....
33–As per sketch No. 3 .....

Per brace after first one:

38–As per sketch No. 1 .....
39–As per sketch No. 2 .....
40–As per sketch No. 3 .....

Pilot

BEAM BRACE

4N202–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening pilot beam brace by drawing out or upsetting same. Fitting not included.

Forge:
- 1–Per first brace
- 2–Per brace after first one

4N202–13 Made (including making feet). **Rate**

Includes going to engine, getting measurements, getting material, blocking out and forging feet, welding same to body dressing, and finishing pilot beam brace and fitting on engine complete.

Forge.

Per first brace:
- 1–As per sketch No. 1
- 2–As per sketch No. 2
- 3–As per sketch No. 3

Per brace after first one:
- 7–As per sketch No. 1
- 8–As per sketch No. 2
- 9–As per sketch No. 3

4N202–13 Made (after feet have been forged). **Rate**

Includes getting feet from stock or from old braces, getting other material, welding feet to body of pilot beam brace, dressing and finishing brace to shape, and fitting brace on engine complete.

Forge.

Per first brace:
- 15–As per sketch No. 1
- 16–As per sketch No. 2
- 17–As per sketch No. 3

Per brace after first one:
- 20–As per sketch No. 1
- 21–As per sketch No. 2
- 22–As per sketch No. 3

4N202–18 Straightened. **Rate**

Includes straightening old pilot beam brace when same has become bent or twisted.

Forge:
- 1–Per first brace, all sketches
- 2–Per brace after first one, all sketches

CAB AND WOOD WORK

Pilot Beam Brace

Pilot

BEAM BRACE

4N202–18 Straightened and fitted up. **Rate**

Includes straightening old pilot beam brace, going to engine and getting measurements, and fitting up brace to engine complete.

Forge.

Per first brace:

5–As per sketch No. 1

6–As per sketch No. 2

7–As per sketch No. 3

Per brace after first one:

10–As per sketch No. 1

11–As per sketch No. 2

12–As per sketch No. 3

4N202–21 Welded (break). **Rate**

Includes doing necessary scarfing, welding break in pilot beam brace, dressing and finishing over weld complete.

Forge:

1–Per first place repaired, all sketches

2–Per place repaired after first one, all sketches

4N202–21 Welded (break and brace fitted up). **Rate**

Includes doing necessary scarfing, welding break in pilot beam brace, going to engine, getting measurements and fitting brace to engine complete.

Forge.

Per first brace:

5–As per sketch No. 1

6–As per sketch No. 2

7–As per sketch No. 3

Per brace after first one:

10–As per sketch No. 1

11–As per sketch No. 2

12–As per sketch No. 3

4N202–21 Welded (crack). **Rate**

Includes making dutchman, welding same in crack in pilot beam brace, dressing and finishing over weld complete.

Forge:

20–Per first place repaired

21–Per place repaired after first one

Pilot

BEAM BRACE

4N202–21 Welded (crack and brace fitted up). **Rate**.....

Includes making dutchman, welding same in crack in pilot beam brace, going to engine, getting measurements, and fitting up brace to engine complete.

Forge.

Per first brace:

25–As per sketch No. 1.....

26–As per sketch No. 2.....

27–As per sketch No. 3.....

Per brace after first one:

30–As per sketch No. 1.....

31–As per sketch No. 2.....

32–As per sketch No. 3.....

CAB AND WOOD WORK

Pilot Beam Brace

Pilot

BEAM BRACE FOOT

4N204–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for pilot beam brace foot.

Forge:

1–Per piece cut.....

4N204–13 Made (at forging machine). **Rate**.....

Includes changing dies in forging machine and forging complete foot for pilot beam brace after foot has been cut and delivered to machine.

Machine:

1–Per first foot.....

2–Per foot after first one.....

Pilot

BEAM GRAB-IRON

Pilot Beam Grab Iron



4N208–4 Cut—Iron. **Rate**

Includes cutting iron at power shears for pilot beam grab-iron.

Power shears:

1–Per piece cut

4N208–12 Lengthened or shortened. **Rate**

Includes lengthening or shortening pilot beam grab-iron by drawing out or upsetting same.

Forge:

1–Per first grab-iron

2–Per grab-iron after first one

4N208–13 Made. **Rate**

Includes getting material, forging, bending, dressing and finishing complete, pilot beam grab-iron.

Forge:

1–Per first grab-iron

2–Per grab-iron after first one

4N208–13 Made (at forging machine). **Rate**

Includes changing dies in forging machine, heating material for pilot beam grab-iron after same has been cut and delivered to machine, and forging grab-iron complete.

Forging machine:

5–Per first grab-iron

6–Per grab-iron after first one

4N208–18 Straightened. **Rate**

Includes straightening old pilot beam grab-iron when same has become bent.

Forge:

1–Per first grab-iron

2–Per grab-iron after first one

CAB AND WOOD WORK

Pilot Beam Grab-iron

Pilot

BEAM GRAB-IRON

4N208–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in pilot beam grab-iron, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N208–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in pilot beam grab-iron, dressing and finishing over weld complete.

Forge:

5–Per first hole..... .....
6–Per hole after first one..... .....

4N208–21 Welded (new end). **Rate**.....

Includes getting material, making end, welding new end on pilot beam grab-iron, dressing and finishing over weld complete.

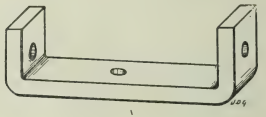
Forge:

10–Per first end..... .....
11–Per end after first one..... .....

Pilot

BRACE, CORNER

Pilot Corner Brace



4N212–9 Forged and dressed. **Rate**.....

Includes getting material, forging, dressing and finishing pilot corner brace complete.

Steam hammer:

1–Per first brace.....

2–Per brace after first one.....

Forge:

3–Per first brace.....

4–Per brace after first one.....

4N212–18 Straightened. **Rate**.....

Includes straightening old pilot corner brace when same has become bent or twisted.

Forge:

1–Per first brace.....

2–Per brace after first one.....

4N212–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in pilot corner brace, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4N212–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in pilot corner brace, dressing and finishing over weld complete.

Forge:

5–Per first hole.....

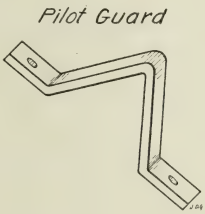
6–Per hole after first one.....

CAB AND WOOD WORK

Pilot—Corner Brace

Pilot

COUPLER GUARD



4N216-2 Bend changed. Rate.....

Includes changing bend in pilot coupler guard.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4N216-4 Cut—Iron. Rate.....

Includes cutting iron for pilot coupler guard at power shears.

Power shears:

1–Per piece cut..... .....

4N216-13 Made. Rate.....

Includes getting material, bending, dressing and finishing pilot coupler guard complete.

Forge:

1–Per first guard..... .....
2–Per guard after first one..... .....

Bulldozer:

3–Per first guard..... .....
4–Per guard after first one..... .....

4N216-18 Straightened. Rate.....

Includes straightening old pilot coupler guard when same has become bent or twisted.

Forge:

1–Per first guard..... .....
2–Per guard after first one..... .....

Pilot

COUPLER GUARD

4N216–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in pilot coupler guard, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N216–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in pilot coupler guard, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4N216–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in pilot coupler guard, dressing and finishing over weld complete.

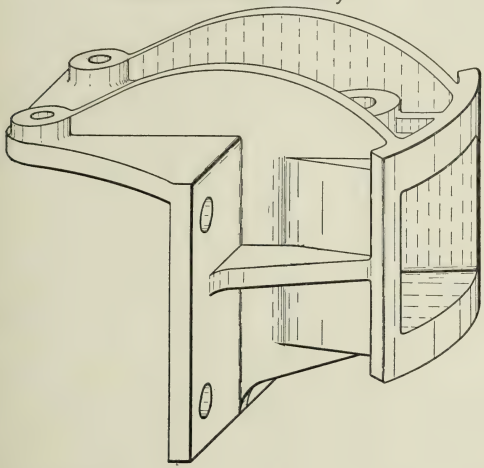
Forge:

9–Per first hole plugged..... .....
10–Per hole plugged after first one..... .....

Pilot

DRAWHEAD

Pilot Draw Head Casting.



4N220–18 Straightened. **Rate**.....

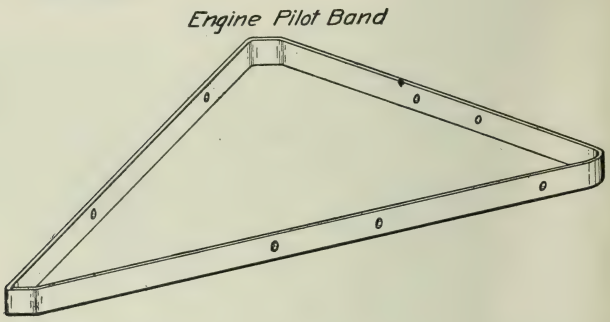
Includes straightening old pilot drawhead when same has become bent or twisted.

Forge:

1–Per first drawhead ....
2–Per drawhead after first one ....

Pilot

RIM BAND



4N240–2 Bend changed. **Rate**.....

Includes changing bend in pilot rim band.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4N240–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for pilot rim band.

Power shears:

1–Per piece cut..... .....

4N240–7 Fitted and applied. **Rate**.....

Includes putting pilot rim band on pilot complete, and heating if necessary.

When band is not heated:

1–Per first band..... .....
2–Per band after first one..... .....

When band is heated.

Forge:

5–Per first band..... .....
6–Per band after first one..... .....

4N240–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening any one of the sides of pilot rim band.

Forge:

1–Per first side lengthened or shortened..... .....
2–Per side lengthened or shortened after first one..... .....

CAB AND WOOD WORK

Pilot Rim Band

Pilot

RIM BAND

4N240–13 Made. **Rate**.....

Includes getting material, bending, dressing, welding and finishing pilot rim band complete.

Forge:

1–Per first band..... .....
2–Per band after first one..... .....

4N240–13 Made (for stub pilots). **Rate**.....

Includes getting material, bending, dressing and finishing pilot rim band complete, when former cannot be used.

Forge:

5–Per first band..... .....
6–Per band after first one..... .....

4N240–15 Punched (holes). **Rate**.....

Includes laying out holes in pilot rim band and punching same at power punch.

Power punch:

1–Per first hole..... .....
2–Per hole after first one..... .....

4N240–18 Straightened. **Rate**.....

Includes straightening old pilot rim band when same has become bent or twisted.

Forge:

1–Per first band..... .....
2–Per band after first one..... .....

4N240–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in pilot rim band, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N240–21 Welded (crack). **Rate**.....

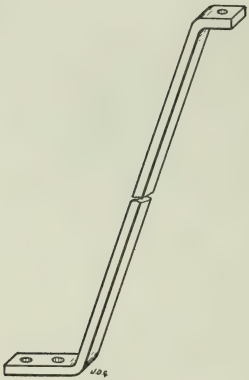
Includes making dutchman, welding same in crack in pilot rim band, dressing and finishing over weld complete.

Forge:

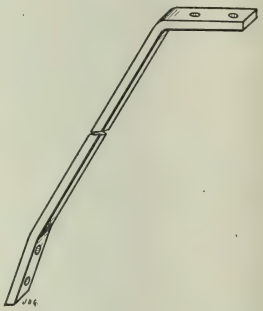
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

Step, Engine
BRACKET

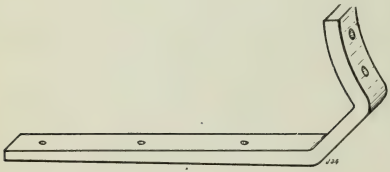
Engine Step Bracket



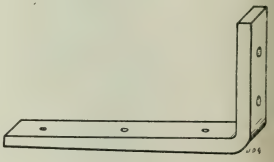
1.



2.



3



4

CAB AND WOOD WORK
Step, Engine—Bracket

Step, Engine
BRACKET

4N250–2 Bend changed. **Rate**.....

Includes changing bend in engine step bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per bend changed after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

4N250–4 Cut—Iron. **Rate**.....

Includes cutting iron for engine step bracket at power shears.

Power shears:

1–Per piece cut .....

4N250–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening engine step bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per bracket after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

Step, Engine
BRACKET

4N250–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, engine step bracket.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per bracket after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

4N250–18 Straightened. **Rate**.....

Includes straightening old engine step bracket when same has become bent or twisted.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per bracket after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

4N250–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in engine step bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place repaired after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....
10–As per sketch No. 4.....

CAB AND WOOD WORK
Step, Engine—Bracket

Step, Engine
BRACKET

4N250–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in engine step bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....
17–As per sketch No. 3..... .....
18–As per sketch No. 4..... .....

Per place repaired after first one:

22–As per sketch No. 1..... .....
23–As per sketch No. 2..... .....
24–As per sketch No. 3..... .....
25–As per sketch No. 4..... .....

4N250–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in engine step bracket, dressing and finishing over weld complete.

Forge.

Per first hole plugged:

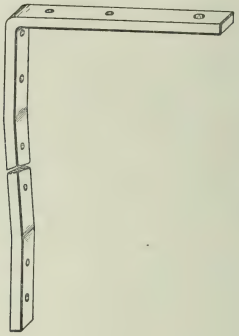
30–As per sketch No. 1..... .....
31–As per sketch No. 2..... .....
32–As per sketch No. 3..... .....
33–As per sketch No. 4..... .....

Per hole plugged after first one:

37–As per sketch No. 1..... .....
38–As per sketch No. 2..... .....
39–As per sketch No. 3..... .....
40–As per sketch No. 4..... .....

Step, Engine
HANGER

Engine Step Hanger



4N256–2 Bend changed. **Rate**.....

Includes changing bend in engine step hanger.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4N256–4 Cut—Iron. **Rate**.....

Includes cutting iron for engine step hanger at power shears.

Power shears:

1–Per piece cut..... .....

4N256–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening engine step hanger by drawing out or upsetting same.

Forge:

1–Per first hanger..... .....
2–Per hanger after first one..... .....

CAB AND WOOD WORK

Step, Engine—Hanger

Step, Engine
HANGER

4N256–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing engine step hanger complete.

Forge:
1–Per first hanger..... .....
2–Per hanger after first one..... .....

4N256–18 Straightened. **Rate**.....

Includes straightening old engine step hanger when same has become bent or twisted.

Forge:
1–Per first hanger..... .....
2–Per hanger after first one..... .....

4N256–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in engine step hanger, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4N256–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in engine step hanger, dressing and finishing over weld complete.

Forge:
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4N256–21 Welded (holes plugged). **Rate**.....

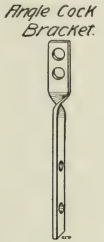
Includes making plug, welding same in hole in engine step hanger, dressing and finishing over weld complete.

Forge:
8–Per first hole plugged..... .....
9–Per hole plugged after first one..... .....

AIR BRAKE MECHANISM

AIR BRAKE MECHANISM

Cock, Angle
BRACKET



4Q10–2 Bend changed. **Rate**.....

Includes changing bend in angle cock bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4Q10–4 Cut—Iron. **Rate**.....

Includes cutting iron for angle cock bracket at power shears complete.

Power shears:

1–Per bracket cut..... .....

4Q10–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening angle cock bracket by drawing out or upsetting same.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

Cock, Angle
BRACKET

4Q10–13 Made. **Rate**.....

Includes getting material for angle cock bracket, forging, bending, dressing and finishing complete.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q10–18 Straightened. **Rate**.....

Includes straightening old angle cock bracket when same has become bent.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q10–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in angle cock bracket, dressing and finishing over weld complete.

Forge:
1–Per first hole..... .....
2–Per hole after first one..... .....

Cylinder, Brake
SPRING, RELEASE

Brake Cylinder Release Spring



4Q16–4 Cut to length. **Rate**.....

Includes getting material and cutting to length, bar for brake cylinder release spring.

1–Per first bar..... .....
2–Per bar after first one..... .....

4Q16–10 Formed. **Rate**.....

Includes rolling complete brake cylinder release spring.

1–Per first spring..... .....
2–Per spring after first one..... .....

4Q16–12 Lengthened. **Rate**.....

Includes opening to length, brake cylinder release spring after same has been rolled.

1–Per first spring..... .....
2–Per spring after first one..... .....

4Q16–11a Heated. **Rate**.....

Includes heating bars and tapering same for brake cylinder release spring complete.

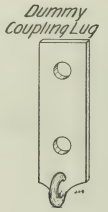
1–Per first spring..... .....
2–Per spring after first one..... .....

4Q16–19a Tempered. **Rate**.....

Includes heating and tempering complete, brake cylinder release spring.

1–Per first spring..... .....
2–Per spring after first one..... .....

Dummy Coupling
LUG



4Q20–13 Made. **Rate**.....

Includes getting material for dummy coupling lug, forging, bending, dressing and finishing complete.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4Q20–18 Straightened. **Rate**.....

Includes straightening old dummy coupling lug when same has become bent.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4Q20–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dummy coupling lug, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first place..... .....

4Q20–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dummy coupling lug, dressing and finishing over weld complete.

Forge:
7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

AIR BRAKE MECHANISM—ENGINE BRAKES
Dummy Coupling Lug

Dummy Coupling
LUG

4Q20–21 Welded (holes plugged). Rate.....

Includes making plug, welding same in hole in dummy coupling lug, dressing and finishing over weld complete.

Forge:

11–Per first hole plugged..... .....

12—Per hole plugged after first one..... .....

Equalizer, Main
FULCRUM SUPPORT

Main Equalizer Fulcrum Support



4Q28–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening main equalizer fulcrum support by drawing out or upsetting same.

Forge:

1–Per first support..... .....
2–Per support after first one..... .....

4Q28–13 Made. **Rate**.....

Includes getting material for main equalizer fulcrum support, forging, dressing and finishing complete.

Steam hammer:

1–Per first support..... .....
2–Per support after first one..... .....

4Q28–18 Straightened. **Rate**.....

Includes straightening old main equalizer fulcrum support when same has become bent.

Steam hammer:

1–Per first support..... .....
2–Per support after first one..... .....

Forge:

3–Per first support..... .....
4–Per support after first one..... .....

4Q28–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in main equalizer fulcrum support, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Equalizer, Main

FULCRUM SUPPORT

4Q28–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in main equalizer fulcrum support, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4Q28–21 Welded (holes plugged). **Rate**.....

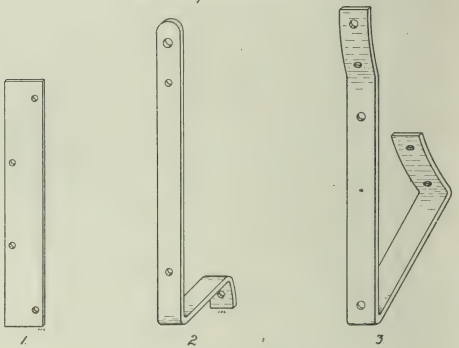
Includes making plug, welding same in hole in main equalizer fulcrum support, dressing and finishing over weld complete.

Forge:

11–Per first hole plugged..... .....
12–Per hole plugged after first one..... .....

Pump, Air
BRACKET

Air Pump Brackets.



4Q50-2 Bend changed. **Rate**.....

Includes changing bend in air pump bracket.

Forge.

Per first bend changed:

1–As per sketch No. 2..... .....
2–As per sketch No. 3..... .....

Per bend changed after first one:

7–As per sketch No. 2..... .....
8–As per sketch No. 3..... .....

4Q50-4 Cut—Iron. **Rate**.....

Includes cutting iron for air pump bracket at power shears.

Power shears:

1–Per piece cut..... .....

AIR BRAKE MECHANISM—ENGINE BRAKES
Pump, Air—Bracket

Pump, Air
BRACKET

4Q50-12 Lengthened or shortened. Rate.....

Includes lengthening or shortening air pump bracket by drawing out or upsetting same.

Forge.

Per first place lengthened or shortened:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per place lengthened or shortened after first one:

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....
10–As per sketch No. 3..... .....

4Q50-13 Made. Rate.....

Includes getting material for air pump bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1, cut off only..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per bracket after first one:

8–As per sketch No. 1, cut off only..... .....
9–As per sketch No. 2..... .....
10–As per sketch No. 3..... .....

4Q50-18 Straightened. Rate.....

Includes straightening old air pump bracket when same has become bent or twisted.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per place repaired after first one:

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....
10–As per sketch No. 3..... .....

Pump, Air
BRACKET

4Q50–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in air pump bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per place repaired after first one:

8–As per sketch No. 1.....
9–As per sketch No. 2.....
10–As per sketch No. 3.....

4Q50–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack, in air pump bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

15–As per sketch No. 1.....
16–As per sketch No. 2.....
17–As per sketch No. 3.....

Per place repaired after first one:

21–As per sketch No. 1.....
22–As per sketch No. 2.....
23–As per sketch No. 3.....

4Q50–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in air pump bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

28–As per sketch No. 1.....
29–As per sketch No. 2.....
30–As per sketch No. 3.....

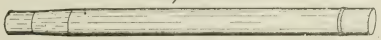
Per hole after first one:

35–As per sketch No. 1.....
36–As per sketch No. 2.....
37–As per sketch No. 3.....

AIR BRAKE MECHANISM—ENGINE BRAKES
Pump, Air—Bracket

Pump, Air
ROD, PISTON

Air Pump Piston Rod



4Q58–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening air pump piston rod by drawing out or upsetting same.

Forge:
1–Per first rod..... .....
2–Per rod after first one..... .....

4Q58–13 Made. **Rate**.....

Includes getting material for air pump piston rod, forging, dressing and finishing complete.

Steam hammer:
1–Per first rod..... .....
2–Per rod after first one..... .....

Forge:
3–Per first rod..... .....
4–Per rod after first one..... .....

4Q58–18 Straightened. **Rate**.....

Includes straightening old air pump piston rod when same has become bent.

Forge:
1–Per first rod..... .....
2–Per rod after first one..... .....

4Q58–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in air pump piston rod, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Pump, Air

ROD, PISTON

4Q58-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in air pump piston rod, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4Q58-21 Welded (new end). **Rate**.....

Includes getting material, slabbing new end on air pump piston rod, dressing and finishing end complete.

Forge:

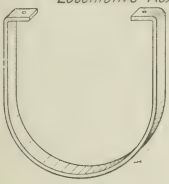
11–Per first end..... .....
12–Per end after first one..... .....

AIR BRAKE MECHANISM—ENGINE BRAKES

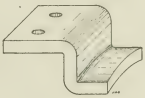
Pump, Air—Piston Rod

Reservoir, Auxiliary
SUPPORT

Locomotive Auxiliary Reservoir Supports



1

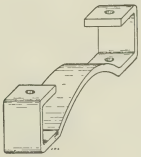


2

Locomotive Auxiliary Reservoir Supports



3



4

4Q60–2 Bend changed. **Rate**.....

Includes changing bend in auxiliary reservoir support.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Per bend changed after first one:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....
11–As per sketch No. 3..... .....
12–As per sketch No. 4..... .....

Reservoir, Auxiliary
SUPPORT

4Q60–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening auxiliary reservoir support by drawing out or upsetting same.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Per support after first one:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....
11–As per sketch No. 3..... .....
12–As per sketch No. 4..... .....

4Q60–13 Made. **Rate**.....

Includes getting material for auxiliary reservoir support, forging, bending, dressing and finishing complete.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Per support after first one:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....
11–As per sketch No. 3..... .....
12–As per sketch No. 4..... .....

4Q60–18 Straightened. **Rate**.....

Includes straightening old auxiliary reservoir support when same has become bent or twisted.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Per support after first one:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....
11–As per sketch No. 3..... .....
12–As per sketch No. 4..... .....

AIR BRAKE MECHANISM—ENGINE BRAKES
Reservoir, Auxiliary—Support

Reservoir, Auxiliary
SUPPORT

4Q60–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in auxiliary reservoir support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per place repaired after first one:

9–As per sketch No. 1.....
10–As per sketch No. 2.....
11–As per sketch No. 3.....
12–As per sketch No. 4.....

4Q60–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in auxiliary reservoir support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

17–As per sketch No. 1.....
18–As per sketch No. 2.....
19–As per sketch No. 3.....
20–As per sketch No. 4.....

Per place repaired after first one:

25–As per sketch No. 1.....
26–As per sketch No. 2.....
27–As per sketch No. 3.....
28–As per sketch No. 4.....

4Q60–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in auxiliary reservoir support, dressing and finishing over weld complete.

Forge.

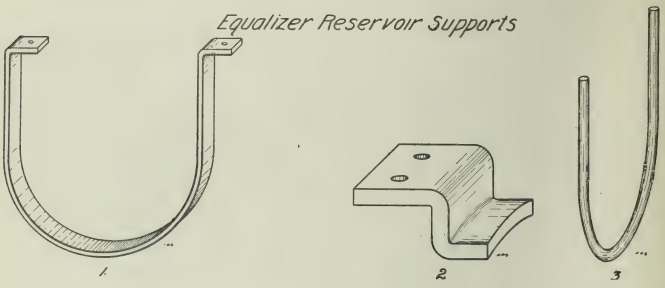
Per first hole:

33–As per sketch No. 1.....
34–As per sketch No. 2.....
35–As per sketch No. 4.....

Per hole after first one:

40–As per sketch No. 1.....
41–As per sketch No. 2.....
42–As per sketch No. 4.....

Reservoir, Equalizer
SUPPORT



4Q72 Note.

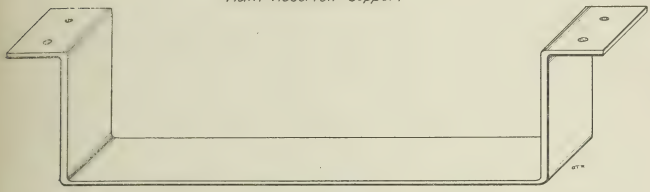
For operations on equalizer reservoir support, see Schedule No. 4Q60, under auxiliary reservoir support.

AIR BRAKE MECHANISM—ENGINE BRAKE

Reservoir, Equalizer—Support

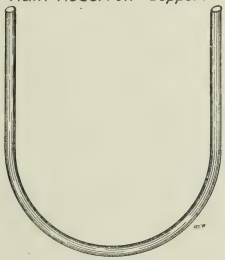
Reservoir, Main
SUPPORT

Main Reservoir Support



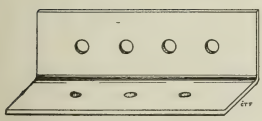
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Main Reservoir Support

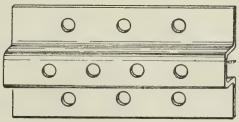


2

Main Reservoir Supports.



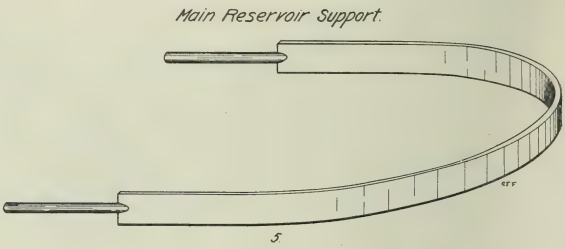
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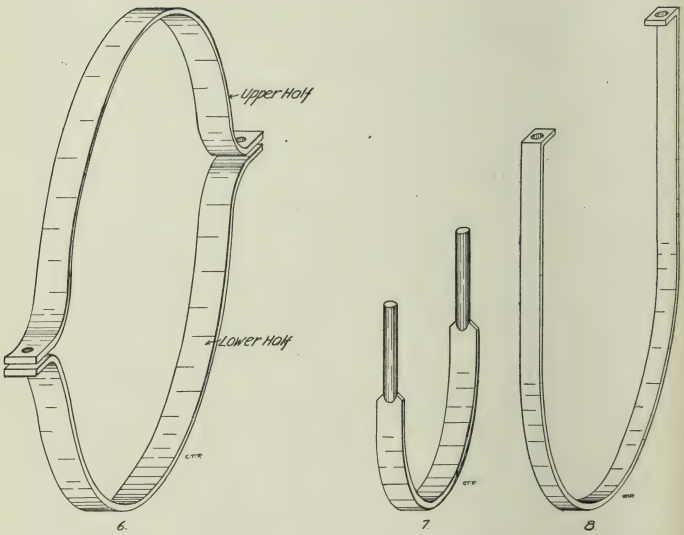
4

AIR BRAKE MECHANISM—ENGINE BRAKES
Reservoir, Main, Support

Reservoir, Main
SUPPORT



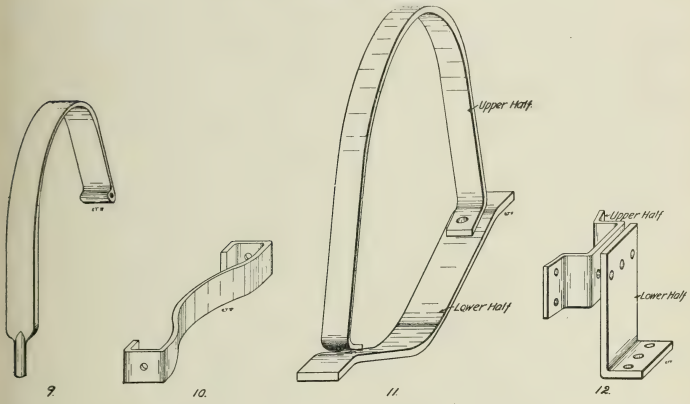
Main Reservoir Supports



AIR BRAKE MECHANISM—ENGINE BRAKES
Reservoir, Main, Support

Reservoir, Main
SUPPORT

Main Reservoir Supports



4Q76–2 Bend changed. **Rate**.....

Includes changing bend in main reservoir support.

Forge.

Per first bend changed:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 5.....
4–As per sketch No. 6, per one half.....
5–As per sketch No. 7.....
6–As per sketch No. 8.....
7–As per sketch No. 9.....
8–As per sketch No. 10.....

Per bend changed after first one:

13–As per sketch No. 1.....
14–As per sketch No. 2.....
15–As per sketch No. 5.....
16–As per sketch No. 6, per half after first half.....
17–As per sketch No. 7.....
18–As per sketch No. 8.....
19–As per sketch No. 9.....
20–As per sketch No. 10.....

Reservoir, Main
SUPPORT

4Q76–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening main reservoir support by drawing out or upsetting same.

Forge.

Per first place lengthened or shortened:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 5.....
4–As per sketch No. 6, per one half.....
5–As per sketch No. 7.....
6–As per sketch No. 8.....
7–As per sketch No. 9.....
8–As per sketch No. 10.....
9–As per sketch No. 11, top half.....
10–As per sketch No. 11, bottom half.....
11–As per sketch No. 12, top half.....
12–As per sketch No. 12, bottom half.....

Per place lengthened or shortened after first one:

17–As per sketch No. 1.....
18–As per sketch No. 2.....
19–As per sketch No. 5.....
20–As per sketch No. 6, per half after first half.....
21–As per sketch No. 7.....
22–As per sketch No. 8.....
23–As per sketch No. 9.....
24–As per sketch No. 10.....
25–As per sketch No. 11, top half.....
26–As per sketch No. 11, bottom half.....
27–As per sketch No. 12, top half.....
28–As per sketch No. 12, bottom half.....

4Q76–13 Made. **Rate**.....

Includes getting material for main reservoir support, forging, bending, dressing and finishing complete.

Steam hammer.

Per first support:

1–As per sketch No. 1.....

Per support after first one:

4–As per sketch No. 1.....

Forge.

Per first support:

9–As per sketch No. 1.....
10–As per sketch No. 2.....
11–As per sketch No. 3.....
12–As per sketch No. 4.....

(Continued on page 211.)

AIR BRAKE MECHANISM—ENGINE BRAKES
Reservoir, Main, Support

Reservoir, Main
SUPPORT

(Continued from page 210.)

13–As per sketch No. 5 .....
14–As per sketch No. 6, per one half .....
15–As per sketch No. 7 .....
16–As per sketch No. 8 .....
17–As per sketch No. 9 .....
18–As per sketch No. 10 .....
19–As per sketch No. 11, top half .....
20–As per sketch No. 11, bottom half .....
21–As per sketch No. 12, top half .....
22–As per sketch No. 12, bottom half .....

Per support after first one:

27–As per sketch No. 1 .....
28–As per sketch No. 2 .....
29–As per sketch No. 3 .....
30–As per sketch No. 4 .....
31–As per sketch No. 5 .....
32–As per sketch No. 6, per half after first half .....
33–As per sketch No. 7 .....
34–As per sketch No. 8 .....
35–As per sketch No. 9 .....
36–As per sketch No. 10 .....
37–As per sketch No. 11, top half .....
38–As per sketch No. 11, bottom half .....
39–As per sketch No. 12, top half .....
40–As per sketch No. 12, bottom half .....

4Q76–13 Made (at bulldozer). **Rate** .....

Includes changing dies in bulldozer, bending and finishing main reservoir support after iron has been delivered to bulldozer.

Per first support:

45–As per sketch No. 3 .....
46–As per sketch No. 4 .....

Per support after first one:

51–As per sketch No. 3 .....
52–As per sketch No. 4 .....

4Q76–18 Straightened. **Rate** .....

Includes straightening old main reservoir support when same has become bent or twisted.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

(Continued on page 212.)

Reservoir, Main
SUPPORT

(Continued from page 211.)

5–As per sketch No. 5 .....
6–As per sketch No. 6, per one half .....
7–As per sketch No. 7 .....
8–As per sketch No. 8 .....
9–As per sketch No. 9 .....
10–As per sketch No. 10 .....
11–As per sketch No. 11, upper half .....
12–As per sketch No. 11, lower half .....
13–As per sketch No. 12, upper half .....
14–As per sketch No. 12, lower half .....

Per place repaired after first one:

19–As per sketch No. 1 .....
20–As per sketch No. 2 .....
21–As per sketch No. 3 .....
22–As per sketch No. 4 .....
23–As per sketch No. 5 .....
24–As per sketch No. 6, per half after first half .....
25–As per sketch No. 7 .....
26–As per sketch No. 8 .....
27–As per sketch No. 9 .....
28–As per sketch No. 10 .....
29–As per sketch No. 11, upper half .....
30–As per sketch No. 11, lower half .....
31–As per sketch No. 12, upper half .....
32–As per sketch No. 12, lower half .....

4Q76–21 Welded (break). **Rate** .....

Includes doing necessary scarfing, welding break in main reservoir support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 5 .....
4–As per sketch No. 6, per one half .....
5–As per sketch No. 7 .....
6–As per sketch No. 8 .....
7–As per sketch No. 9 .....
8–As per sketch No. 10 .....
9–As per sketch No. 11, upper half .....
10–As per sketch No. 11, lower half .....
11–As per sketch No. 12, upper half .....
12–As per sketch No. 12, lower half .....

AIR BRAKE MECHANISM—ENGINE BRAKES
Reservoir, Main, Support

Reservoir, Main
SUPPORT

Per place repaired after first one:
17–As per sketch No. 1 .....
18–As per sketch No. 2 .....
19–As per sketch No. 5 .....
20–As per sketch No. 6, per half after first half .....
21–As per sketch No. 7 .....
22–As per sketch No. 8 .....
23–As per sketch No. 9 .....
24–As per sketch No. 10 .....
25–As per sketch No. 11, upper half .....
26–As per sketch No. 11, lower half .....
27–As per sketch No. 12, upper half .....
28–As per sketch No. 12, lower half .....

4Q76–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in main reservoir support, dressing and finishing over weld complete.

Forge.

Per first place repaired:
33–As per sketch No. 1 .....
34–As per sketch No. 2 .....
35–As per sketch No. 3 .....
36–As per sketch No. 4 .....
37–As per sketch No. 5 .....
38–As per sketch No. 6, per one-half .....
39–As per sketch No. 7 .....
40–As per sketch No. 8 .....
41–As per sketch No. 9 .....
42–As per sketch No. 10 .....
43–As per sketch No. 11, upper half .....
44–As per sketch No. 11, lower half .....
45–As per sketch No. 12, upper half .....
46–As per sketch No. 12, lower half .....

Per place repaired after first one:
51–As per sketch No. 1 .....
52–As per sketch No. 2 .....
53–As per sketch No. 3 .....
54–As per sketch No. 4 .....
55–As per sketch No. 5 .....
56–As per sketch No. 6, per half after first half .....
57–As per sketch No. 7 .....
58–As per sketch No. 8 .....
59–As per sketch No. 9 .....
60–As per sketch No. 10 .....
61–As per sketch No. 11, upper half .....
62–As per sketch No. 11, lower half .....
63–As per sketch No. 12, upper half .....
64–As per sketch No. 12, lower half .....

Reservoir, Main
SUPPORT

4Q76–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in main reservoir support, dressing and finishing over weld complete.

Forge.

Per first hole plugged:

69–As per sketch No. 1..... .....
70–As per sketch No. 3..... .....
71–As per sketch No. 4..... .....
72–As per sketch No. 6, per one-half..... .....
73–As per sketch No. 8..... .....
74–As per sketch No. 9..... .....
75–As per sketch No. 10..... .....
76–As per sketch No. 11, upper half..... .....
77–As per sketch No. 11, lower half..... .....
78–As per sketch No. 12, upper half..... .....
79–As per sketch No. 12, lower half..... .....

Per hole plugged after first one:

84–As per sketch No. 1..... .....
85–As per sketch No. 3..... .....
86–As per sketch No. 4..... .....
87–As per sketch No. 6, per half after first half..... .....
88–As per sketch No. 8..... .....
89–As per sketch No. 9..... .....
90–As per sketch No. 10..... .....
91–As per sketch No. 11, upper half..... .....
92–As per sketch No. 11, lower half..... .....
93–As per sketch No. 12, upper half..... .....
94–As per sketch No. 12, lower half..... .....

4Q76–21 Welded (new ends). **Rate**.....

Includes welding stock on main reservoir support for new end, dressing and finishing to shape complete.

Forge.

Per first end:

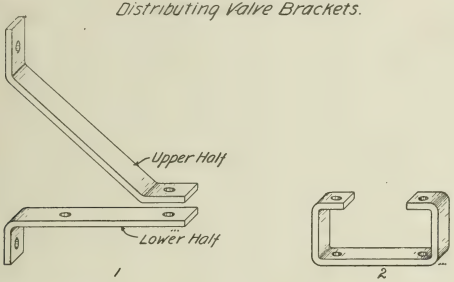
99–As per sketch No. 5..... .....
100–As per sketch No. 7..... .....
101–As per sketch No. 9..... .....

Per end after first one:

105–As per sketch No. 5..... .....
106–As per sketch No. 7..... .....
107–As per sketch No. 9..... .....

Valve, Distributing
BRACKET

Distributing Valve Brackets.



4Q90–2 Bend changed. **Rate**.....

Includes changing bend in distributing valve bracket.

Forge.

Per first bend changed:

1–As per sketch No. 1, upper half..... .....
2–As per sketch No. 1, lower half..... .....
3–As per sketch No. 2..... .....

Per bend changed after first one:

9–As per sketch No. 1, upper half..... .....
10–As per sketch No. 1, lower half..... .....
11–As per sketch No. 2..... .....

4Q90–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening distributing valve bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1, upper half..... .....
2–As per sketch No. 1, lower half..... .....
3–As per sketch No. 2..... .....

Per bracket after first one:

9–As per sketch No. 1, upper half..... .....
10–As per sketch No. 1, lower half..... .....
11–As per sketch No. 2..... .....

Valve, Distributing
BRACKET

4Q90–13 Made. **Rate**.....

Includes getting material for distributing valve bracket, forging, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1, upper half.....
2–As per sketch No. 1, lower half.....
3–As per sketch No. 2.....

Per bracket after first one:

9–As per sketch No. 1, upper half.....
10–As per sketch No. 1, lower half.....
11–As per sketch No. 2.....

4Q90–18 Straightened. **Rate**.....

Includes straightening old distributing valve bracket when same has become bent or twisted.

Forge.

Per first bracket:

1–As per sketch No. 1, upper half.....
2–As per sketch No. 1, lower half.....
3–As per sketch No. 2.....

Per bracket after first one:

8–As per sketch No. 1, upper half.....
9–As per sketch No. 1, lower half.....
10–As per sketch No. 2.....

4Q90–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in distributing valve bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1, upper half.....
2–As per sketch No. 1, lower half.....
3–As per sketch No. 2.....

Per place repaired after first one:

8–As per sketch No. 1, upper half.....
9–As per sketch No. 1, lower half.....
10–As per sketch No. 2.....

Valve, Distributing
BRACKET

4Q90-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in distributing valve bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

15–As per sketch No. 1, upper half.....
16–As per sketch No. 1, lower half.....
17–As per sketch No. 2.....

Per place repaired after first one:

22–As per sketch No. 1, upper half.....
23–As per sketch No. 1, lower half.....
24–As per sketch No. 2.....

4Q90-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in distributing valve bracket, dressing and finishing over weld complete.

Forge.

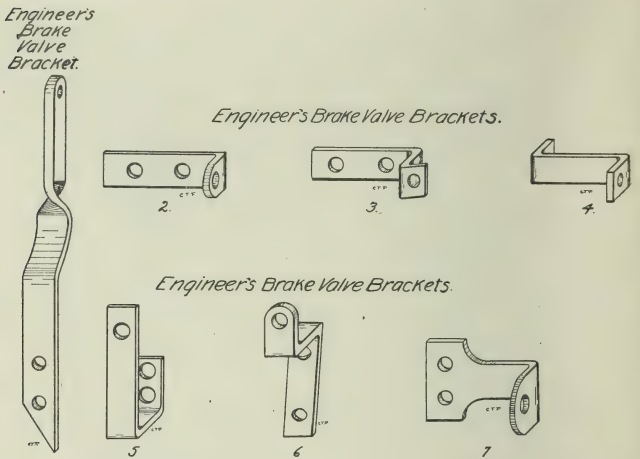
Per first hole:

29–As per sketch No. 1, upper half.....
30–As per sketch No. 1, lower half.....
31–As per sketch No. 2.....

Per hole after first one:

35–As per sketch No. 1, upper half.....
36–As per sketch No. 1, lower half.....
37–As per sketch No. 2.....

Valve, Engineer's Brake
BRACKET



4Q96–2 Bend changed. **Rate**.....

Includes changing bend in engineer's brake valve bracket.

Forge.

Per first bend changed:

1–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7 ....

Per bend changed after first one:

12–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7..... .....

4Q96–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening engineer's brake valve bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7..... .....

Per bracket after first one:

12–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7,..... .....

AIR BRAKE MECHANISM—ENGINE BRAKES

Valve, Engineer's Brake—Bracket

Valve, Engineer's Brake
BRACKET

4Q96–13 Made. **Rate**.....

Includes getting material for engineer's brake valve bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....

Per bracket after first one:

12–As per sketch No. 1.....
13–As per sketch No. 2.....
14–As per sketch No. 3.....
15–As per sketch No. 4.....
16–As per sketch No. 5.....
17–As per sketch No. 6.....
18–As per sketch No. 7.....

4Q96–18 Straightened. **Rate**.....

Includes straightening old engineer's brake valve bracket when same has become bent or twisted.

Forge.

Per first bracket:

1–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7.....

Per bracket after first one:

12–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7.....

4Q96–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in engineer's brake valve bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7.....

Per place repaired after first one:

12–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7.....

Valve, Engineer's Brake
BRACKET

4Q96–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in engineer's brake valve bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

23–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7..... .....

Per place repaired after first one:

34–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7..... .....

4Q96–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in engineer's brake valve bracket, dressing and finishing over weld complete.

Forge.

Per first hole.:

45–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7..... .....

Per hole after first one:

56–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7..... .....

Valve, Feed
BRACKET



4Q100–2 Bend changed. **Rate**.....

Includes changing bend in feed valve bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4Q100–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening feed valve bracket by drawing out or upsetting same.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q100–13 Made. **Rate**.....

Includes getting material for feed valve bracket, forging, dressing and finishing complete.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q100–18 Straightened. **Rate**.....

Includes straightening old feed valve bracket when same has become bent or twisted.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

Valve, Feed

BRACKET

4Q100–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in feed valve bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4Q100–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in feed valve bracket, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4Q100–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in feed valve bracket, dressing and finishing over weld complete.

Forge:

11–Per first hole..... .....
12–Per hole after first one..... .....

Valve, Signal
BRACKET

Signal Valve Bracket



4Q110-2 Bend changed. **Rate**.....

Includes changing bend in signal valve bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4Q110-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening signal valve bracket by drawing out or upsetting same.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q110-13 Made. **Rate**.....

Includes getting material for signal valve bracket, forging dressing and finishing complete.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q110-18 Straightened. **Rate**.....

Includes straightening old signal valve bracket when same has become bent or twisted.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4Q110-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in signal valve bracket, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Valve, Signal

BRACKET

4Q110–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in signal valve bracket, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4Q110–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in signal valve bracket, dressing and finishing over weld complete.

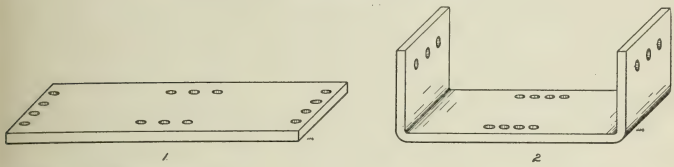
Forge:

11–Per first hole..... .....
12–Per hole after first one..... .....

Tender Brakes

CYLINDER BRACKET

Tender Brake Cylinder Brackets.



4Q200–2 Bend changed. **Rate**.....

Includes changing bend in tender brake cylinder bracket.

Forge.

As per sketch No. 2:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4Q200–2 Bent (at bulldozer). **Rate**.....

Includes bending, at bulldozer, tender brake cylinder bracket after iron has been delivered to bulldozer. Includes changing dies.

As per sketch No. 2:

7–Per first bracket..... .....
8–Per bracket after first one..... .....

4Q200–4 Cut—Iron. **Rate**.....

Includes cutting iron, at power shears, for tender brake cylinder bracket.

Power shears:

1–Per piece cut..... .....

4Q200–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, ready for dressing or making finished, tender brake cylinder bracket.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

Tender Brakes

CYLINDER BRACKET

4Q200-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender brake cylinder bracket by drawing out or upsetting same.

Forge.

Per first bracket:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per bracket after first one:

7–As per sketch No. 1 .....

8–As per sketch No. 2 .....

4Q200-13 Made complete. **Rate**.....

Includes getting material for tender brake cylinder bracket, forging, bending, dressing and finishing complete.

Forge.

Per first bracket:

1–As per sketch No. 1, iron forged .....

2–As per sketch No. 2, from bar iron .....

Per bracket after first one:

7–As per sketch No. 1, iron forged .....

8–As per sketch No. 2, from bar iron .....

4Q200-18 Straightened. **Rate**.....

Includes straightening old tender brake cylinder bracket when same has become bent or twisted.

Forge.

Per first bracket:

1–As per sketch No. 1 .....

2–As per sketch No. 2 .....

Per bracket after first one:

7–As per sketch No. 1 .....

8–As per sketch No. 2 .....

AIR BRAKE MECHANISM—TENDER BRAKES

Cylinder Bracket

Tender Brakes

CYLINDER BRACKET

4Q200-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender brake cylinder bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....

4Q200-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender brake cylinder bracket, dressing and finishing over weld complete.

Forge.

Per first place repaired:

13–As per sketch No. 1..... .....
14–As per sketch No. 2..... .....

Per place repaired after first one:

19–As per sketch No. 1..... .....
20–As per sketch No. 2..... .....

4Q200-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender brake cylinder bracket, dressing and finishing over weld complete.

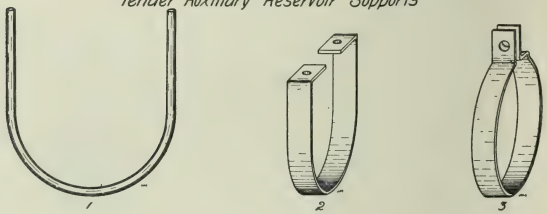
Forge:

25–Per first hole plugged..... .....
26–Per hole plugged after first one..... .....

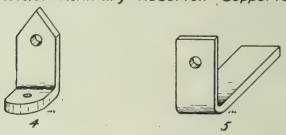
Tender Brakes

RESERVOIR, AUXILIARY—SUPPORT

Tender Auxiliary Reservoir Supports



Tender Auxiliary Reservoir Supports



4Q250–2 Bend changed. **Rate**.....

Includes changing bend in tender brake auxiliary reservoir support.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per bend changed after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....

AIR BRAKE MECHANISM—TENDER BRAKES

Reservoir, Auxiliary Support

Tender Brakes

RESERVOIR, AUXILIARY—SUPPORT

4Q250–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender brake auxiliary reservoir support.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per support after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....

4Q250–13 Made. **Rate**.....

Includes getting material for tender brake auxiliary reservoir support, forging, bending, dressing and finishing complete.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per support after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....

4Q250–18 Straightened. **Rate**.....

Includes straightening old tender brake auxiliary reservoir support when same has become bent or twisted.

Forge.

Per first support:

1–As per sketches Nos. 1, 2, 3, 4, 5..... .....

Per support after first one:

10–As per sketches Nos. 1, 2, 3, 4, 5..... .....

Tender Brakes

RESERVOIR, AUXILIARY—SUPPORT

4Q250–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender brake auxiliary reservoir support.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketches Nos. 2, 3, 4, 5..... .....

Per place repaired after first one:

10–As per sketch No. 1..... .....
11–As per sketches Nos. 2, 3, 4, 5..... .....

4Q250–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender brake auxiliary reservoir support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

19–As per sketch No. 1..... .....
20–As per sketches Nos. 2, 3, 4, 5..... .....

Per place repaired after first one:

28–As per sketch No. 1..... .....
29–As per sketches Nos. 2, 3, 4, 5..... .....

4Q250–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender brake auxiliary reservoir support, dressing and finishing over weld complete.

Forge.

Per first hole plugged:

37–As per sketches Nos. 2, 3, 4, 5..... .....

Per hole plugged after first one:

45–As per sketches Nos. 2, 3, 4, 5..... .....

AIR BRAKE MECHANISM—TENDER BRAKES

Reservoir, Auxiliary Support

Tender Brakes

ROD, PUSH

4Q260–12 Lengthened or shortened (by drawing out or upsetting). **Rate**.....

Includes lengthening or shortening tender brake push rod by drawing out or upsetting same.

Forge:

1–Per first push rod..... .....
2–Per push rod after first one..... .....

4Q260–12 Lengthened (by welding). **Rate**.....

Includes cutting rod in two, doing necessary scarfing, welding in required new material, dressing and finishing tender brake push rod to length complete.

Forge:

7–Per first weld in rod..... .....
8–Per weld in rod after first one..... .....

4Q260–13 Made. **Rate**.....

Includes getting material, blocking out and forging tender brake push rod with jaw ends made solid from material or from flat iron, welding ends on body of rod, dressing and finishing rod complete.

Forge.

When jaw ends are forged from solid material:

1–Per first rod..... .....
2–Per rod after first one..... .....

When jaw is made from flat iron:

7–Per first rod..... .....
8–Per rod after first one..... .....

4Q260–17 Shortened (by welding). **Rate**.....

Includes cutting push rod in two, taking out required stock, doing necessary scarfing and making weld, dressing and finishing tender brake push rod to shortened length complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4Q260–18 Straightened. **Rate**.....

Includes straightening old tender brake push rod when same has become bent.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

Tender Brakes

ROD, PUSH

4Q260–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender brake push rod, dressing and finishing over weld complete.

Forge:

1–Per place first repaired..... .....
2–Per place repaired after first one..... .....

4Q260–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender brake push rod, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4Q260–21 Welded (ends). **Rate**.....

Includes doing necessary scarfing, welding end on tender brake push rod, dressing and finishing over weld complete.

Forge:

11–Per first end..... .....
12–Per end after first one..... .....

AIR BRAKE MECHANISM—TENDER BRAKES

Rod, Push

Tender Brakes
ROD, PUSH—END, JAW

4Q262-2 Bent. **Rate**.....

Includes bending iron for tender brake push rod jaw end in machine after iron has been cut and punched.

Machine:
1–Per first jaw..... .....
2–Per jaw after first one..... .....

4Q262-4 Cut—Iron. **Rate**.....

Includes cutting iron for tender brake push rod jaw end, at power shears.

Power shears:
1–Per jaw..... .....

4Q262-9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, jaw end of tender brake push rod.

Forge.
Per first jaw end:
1–Jaw 3″ or less in width..... .....
2–Jaw over 3″ in width..... .....
Per jaw end after first one:
7–Jaw 3″ or less in width..... .....
8–Jaw over 3″ in width..... .....

4Q262-18 Straightened. **Rate**.....

Includes straightening old tender brake push rod jaw end when same has become bent or twisted.

Forge:
1–Per first jaw end..... .....
2–Per jaw end after first one..... .....

4Q262-21 Welded (on body only). **Rate**.....

Includes doing necessary scarfing and welding jaw end of tender brake push rod on rod body, dressing and finishing over weld complete.

Forge:
1–Per first jaw end..... .....
2–Per jaw end after first one..... .....

BOILER

BOILER

Dome
BRACE END



4R10-6 Dressed. **Rate**.....

Includes dressing and finishing complete, dome brace end after end has been forged.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4R10-9 Forged. **Rate**.....

Includes getting material, blocking out and forging dome brace end complete, ready for dressing.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

3–Per first end..... .....
4–Per end after first one..... .....

4R10-9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing dome brace end complete.

Forge:

7–Per first end..... .....
8–Per end after first one..... .....

4R10-18 Straightened. **Rate**.....

Includes straightening old dome brace end when same has become bent or twisted.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

Dome

BRACE END

4R10–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dome brace end, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4R10–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dome brace end, dressing and finishing over weld complete.

Forge:

5–Per first hole..... .....
6–Per hole after first one..... .....

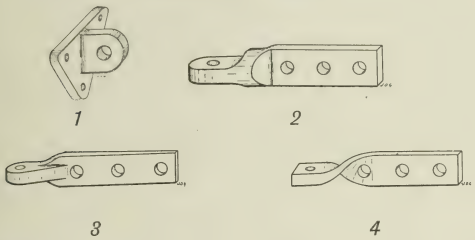
BOILER

Dome Brace End

Dome

BRACE LUG

Dome Brace Lugs



4R14–6 Dressed. **Rate**.....

Includes dressing ends and finishing complete, dome brace lug after lug has been forged.

Forge.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per lug after first one:

6–As per sketch No. 1..... .....
7–As per sketch No. 2..... .....
8–As per sketch No. 3..... .....

4R14–9 Forged. **Rate**.....

Includes getting material for dome brace lug, blocking out and forging complete, ready for dressing.

Steam hammer.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per lug after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....
7–As per sketch No. 3..... .....

Dome

BRACE LUG

Forge.

Per first lug:

10–As per sketch No. 1 .....

11–As per sketch No. 2 .....

12–As per sketch No. 3 .....

Per lug after first one:

15–As per sketch No. 1 .....

16–As per sketch No. 2 .....

17–As per sketch No. 3 .....

4R14–9 Forged and dressed. **Rate**.....

Includes getting material for dome brace lug, blocking out, forging, dressing and finishing complete.

Forge.

Per first lug:

20–As per sketch No. 1 .....

21–As per sketch No. 2 .....

22–As per sketch No. 3 .....

23–As per sketch No. 4 .....

Per lug after first one:

27–As per sketch No. 1 .....

28–As per sketch No. 2 .....

29–As per sketch No. 3 .....

30–As per sketch No. 4 .....

4R14–18 Straightened. **Rate**.....

Includes straightening old dome brace lug when same has become bent or twisted.

Forge.

Per first lug:

1–As per sketches Nos. 1, 2, 3, 4 .....

Per lug after first one:

8–As per sketches Nos. 1, 2, 3, 4 .....

4R14–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dome brace lug, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketches Nos. 1, 2, 3, 4 .....

Per place repaired after first one:

8–As per sketches Nos. 1, 2, 3, 4 .....

BOILER

Dome Brace Lug

Dome

BRACE LUG

4R14–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dome brace lug, dressing and finishing over weld complete.

Forge.

Per first hole:

15–As per sketches Nos. 1, 2, 3, 4..... .....

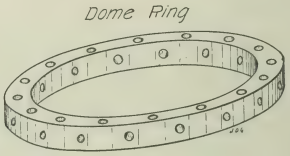
Per hole after first one:..... .....

21–As per sketches Nos. 1, 2, 3, 4..... .....

BOILER
Dome Brace Lug

Dome

RING



4R18–9 Forged. **Rate**.....

Includes getting material, blocking out and forging iron complete, for dome ring.

Steam hammer:

1–Per first ring..... .....
2–Per ring after first one..... .....

Forge:

3–Per first ring..... .....
4–Per ring after first one..... .....

4R18–9 Forged and dressed. **Rate**.....

Includes getting material for dome ring, blocking out, forging, scarfing, bending, welding and dressing complete.

Forge:

7–Per first ring..... .....
8–Per ring after first one..... .....

4R18–13 Made (from bar iron). **Rate**.....

Includes getting bar iron for dome ring, bending, scarfing, welding and finishing complete.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R18–16 Scarfed. **Rate**.....

Includes scarfing ends of dome ring before same have been rolled, complete, ready for welding.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

BOILER

Dome Ring

Dome

RING

4R18–18 Straightened. **Rate**.....

Includes straightening old dome ring when same has become bent or twisted.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R18–21 Welded only (after ring has been rolled and scarfed). **Rate**.....

Includes getting dome ring after same has been rolled and scarfed, making weld in ring, dressing and finishing over weld complete.

Forge:

1–Per first weld..... .....
2–Per weld after first one..... .....

4R18–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dome ring, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4R18–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dome ring, dressing and finishing over weld complete.

Forge:

9–Per first place repaired..... .....
10–Per place repaired after first one..... .....

4R18–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dome ring, dressing and finishing over weld complete.

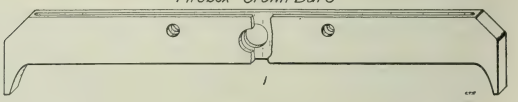
Forge:

13–Per first hole..... .....
14–Per hole after first one..... .....

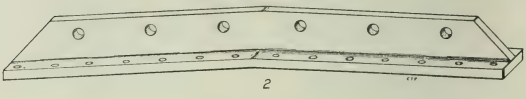
Firebox

BAR, CROWN

Firebox Crown Bars



Firebox Crown Bars



4R30–2 Bent—Iron. **Rate**.....

Includes changing dies in machine if necessary, and bending iron for crown bar after iron has been cut.

Forge:

1–Per first piece bent..... .....
2–Per piece bent after first one..... .....

Machine:

3–Per first piece bent..... .....
4–Per piece bent after first one..... .....

4R30–2 Bent (toe to fit sheet). **Rate**.....

Includes bending toe of crown bar to fit side sheet, and cutting off end of bar if necessary.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4R30–4 Cut—Iron. **Rate**.....

Includes cutting iron for body of crown bar at power shears.

Power shears:

1–Per piece cut..... .....

BOILER

Firebox Crown Bar

Firebox

BAR, CROWN

4R30–9 Forged (toes only). **Rate**.....

Includes getting material, blocking out and forging toes of crown bar.

Steam hammer:

1–Per first toe..... .....
2–Per toe after first one..... .....

Forge:

3–Per first toe..... .....
4–Per toe after first one..... .....

4R30–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening crown bar by drawing out or upsetting toe end or remodel end.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4R30–18 Straightened. **Rate**.....

Includes straightening old crown bar when same has become bent or twisted.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4R30–21 Welded and dressed (parts together). **Rate**.....

Includes getting body of crown bar after iron has been cut, and toe after same has been forged, welding on toe, dressing and finishing bar to shape complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4R30–21 Welded (new toe end). **Rate**.....

Includes repairing crown bar toe end by jumping on material for new end, dressing and finishing end complete.

Forge:

5–Per first end..... .....
6–Per end after first one..... .....

Firebox

BAR, CROWN

4R30–21 Welded (new side on end of bar). **Rate**.....

Includes doing necessary scarfing, welding on required new stock where end is broken on side in old weld, dressing and finishing end and toe to shape complete; includes making toe.

Forge.

Per first end:

10–When welded on one side of end..... .....
11–When welded on both sides of end..... .....

Per end after first one:

15–When welded on one side of end..... .....
16–When welded on both sides of end..... .....

4R30–21 Welded (dutchman on corner of toe). **Rate**.....

Includes making dutchman, welding same on corner of toe, dressing and finishing end of toe complete.

Forge:

20–Per first place repaired..... .....
21–Per place repaired after first one..... .....

4R30–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in crown bar, dressing and finishing over weld complete.

Forge:

25–Per first hole..... .....
26–Per hole after first one..... .....

4R30–21 Welded (split end). **Rate**.....

Includes heating and welding complete, split end of crown bar.

Forge:

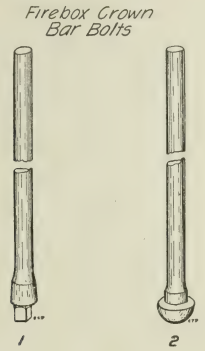
30–Per first end..... .....
31–Per end after first one..... .....

BOILER

Firebox Crown Bar

Firebox

BAR, CROWN—BOLT



4R32-4 Cut—Iron. Rate.....

Includes cutting iron for crown bar bolt at power shears.

Power shears:

1–Per piece cut..... .....

4R32-13 Made (at forge). Rate.....

Includes getting material, forging end of crown bar bolt, welding same on bolt rod, dressing and finishing bolt to shape complete.

Forge.

Per first bolt:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bolt after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER
Firebox Crown Bar Bolt

Firebox

BAR, CROWN—BOLT

4R32-13 Made (at machine). **Rate**.....

Includes changing dies in forging machine, forging crown bar bolt complete, after iron has been delivered at machine.

Machine.

Per first bolt:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per bolt after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4R32-21 Welded (to adjust length). **Rate**.....

Includes welding in necessary stock on crown bar bolt to adjust bolt to length complete.

Forge.

Per first bolt:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bolt after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

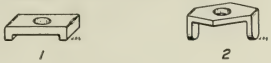
BOILER

Firebox Crown Bar Bolt

Firebox

BAR, CROWN—BOLT WASHER

Firebox Crown Bar Bolt Washers



4R36–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in machine, bending iron for crown bar bolt washer at bulldozer after iron has been cut and punched.

Bulldozer:
1–Per first washer..... .....
2–Per washer after first one..... .....

4R36–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for crown bar bolt washer.

Power shears:
1–Per piece cut as per sketch No. 2..... .....

4R36–13 Made. **Rate**.....

Includes getting material for crown bar bolt washer, forging, bending, dressing and finishing complete.

Forge.
Per first washer:
1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
Per washer after first one:
5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4R36–15 Punched. **Rate**.....

Includes changing dies in power punch and punching hole in crown bar bolt washer.

Power punch.
Per first washer:
1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
Per washer after first one:
5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER
Firebox Crown Bar Bolt Washer

Firebox

BAR, CROWN—BOLT WASHER

4R36–18 Straightened. **Rate**.....

Includes straightening old crown bar bolt washer when same has become bent.

Forge.

Per first washer:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per washer after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER

Firebox Crown Bar Bolt Washer

Firebox

BAR, CROWN—SLING



4R40–2 Bent (at bulldozer). **Rate**.....

Includes bending iron for crown bar sling at bulldozer after iron has been cut at power shears.

1–Per first sling..... .....
2–Per sling after first one..... .....

4R40–4 Cut—Iron. **Rate**.....

Includes cutting iron for crown bar sling at power shears.

Power shears:
1–Per piece cut..... .....

4R40–6 Dressed and welded. **Rate**.....

Includes dressing crown bar sling after same has been bent at bulldozer, welding and finishing sling complete.

Forge:
1–Per first sling..... .....
2–Per sling after first one..... .....

4R40–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening crown bar sling by drawing out or upsetting same.

Forge:
1–Per first sling..... .....
2–Per sling after first one..... .....

4R40–13 Made. **Rate**.....

Includes getting material for crown bar sling, forging, bending, dressing, welding and finishing complete.

Forge:
1–Per first sling..... .....
2–Per sling after first one..... .....

4R40–18 Straightened. **Rate**.....

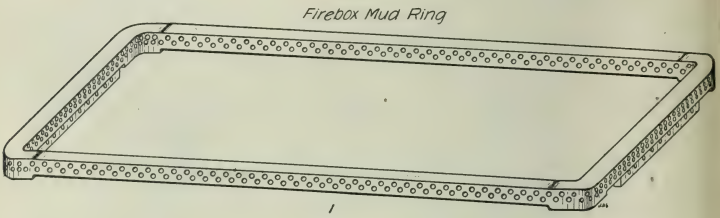
Includes straightening old crown bar sling when same has become bent.

Forge:
1–Per first sling..... .....
2–Per sling after first one..... .....

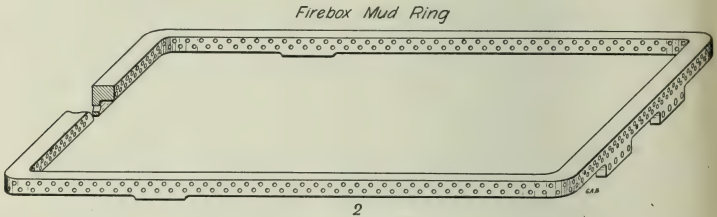
BOILER
Firebox Crown Bar Sling

Firebox

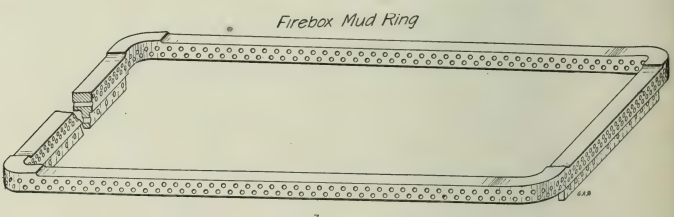
RING, MUD



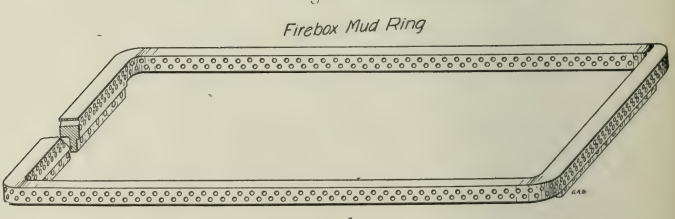
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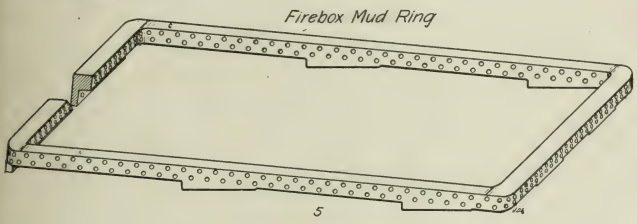


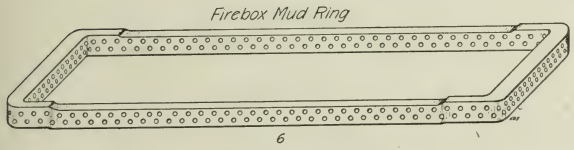
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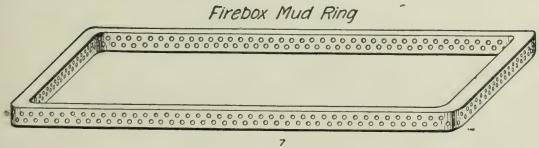
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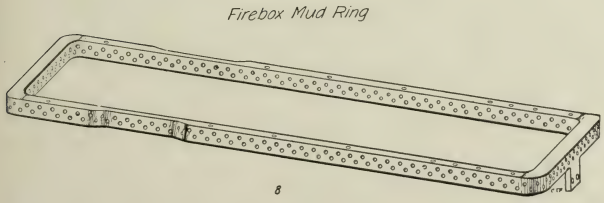
Firebox Mud Ring

Firebox
RING, MUD





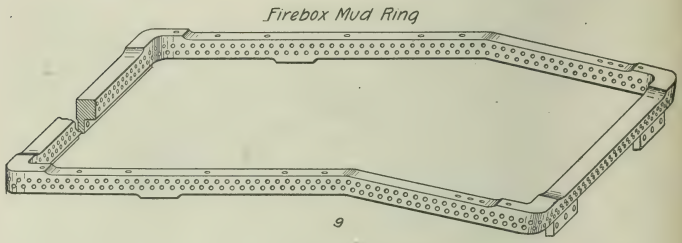


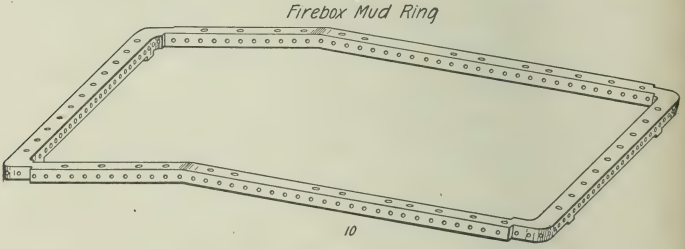


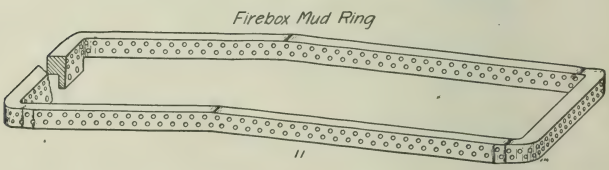
BOILER
Firebox Mud Ring

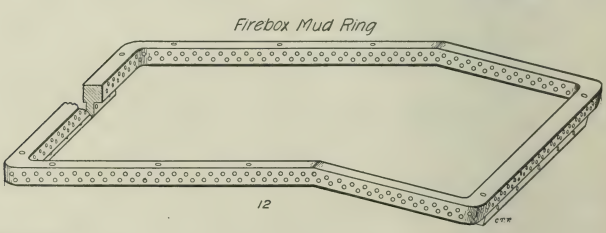
Firebox

RING, MUD







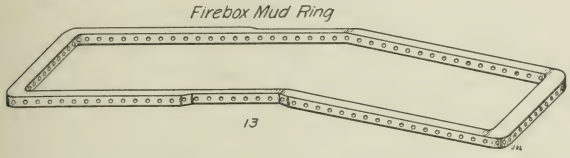


BOILER

Firebox Mud Ring

Firebox

RING, MUD



Note.

No additional time is to be allowed for taking old or new mudrings in or out of blacksmith shop, putting mudrings on wheels or supporter bar or clamps on mudrings. Times for these operations are included in all forging, scarfing, welding and repairing operations.

4R60-9 Forged (sides and ends separately). **Rate**.....

Includes getting material, blocking out and forging complete, ready for scarfing, sides, ends or halves of mudring as designated in the following classification. (See note, above.)

Steam hammer.

Per first side, end or half:

1–As per sketches Nos. 1, 2, 3, 4, side .....
2–As per sketches Nos. 1, 2, 3, 4, end .....
9–As per sketch No. 5, side.....
10–As per sketch No. 5, front end.....
11–As per sketch No. 5, back end.....
12–As per sketch No. 6, side.....
13–As per sketch No. 6, end.....
14–As per sketch No. 7, side.....
15–As per sketch No. 7, end.....
16–As per sketch No. 8, side.....
17–As per sketch No. 8, end.....
18–As per sketch No. 9, side.....
19–As per sketch No. 9, front end.....
20–As per sketch No. 9, back end.....
21–As per sketch No. 10, one half.....
22–As per sketch No. 11, side.....
23–As per sketch No. 11, front end.....
24–As per sketch No. 11, back end.....
25–As per sketch No. 12, side.....
26–As per sketch No. 12, end.....
27–As per sketch No. 13, one half.....

Firebox

RING, MUD

Per side, end or half after first one:

35–As per sketches Nos. 1, 2, 3, 4, side .....
36–As per sketches Nos. 1, 2, 3, 4, end .....
43–As per sketch No. 5, side .....
44–As per sketch No. 5, front end .....
45–As per sketch No. 5, back end .....
46–As per sketch No. 6, side .....
47–As per sketch No. 6, end .....
48–As per sketch No. 7, side .....
49–As per sketch No. 7, end .....
50–As per sketch No. 8, side .....
51–As per sketch No. 8, end .....
52–As per sketch No. 9, side .....
53–As per sketch No. 9, front end .....
54–As per sketch No. 9, back end .....
55–As per sketch No. 10, one half .....
56–As per sketch No. 11, side .....
57–As per sketch No. 11, front end .....
58–As per sketch No. 11, back end .....
59–As per sketch No. 12, side .....
60–As per sketch No. 12, end .....
61–As per sketch No. 13, one half .....

4R60–9 Forged (ring complete). **Rate**.....

Includes getting material, blocking out and forging complete, ready for scarfing, all sides and ends of mudrings designated by sketches in the following classification. (See note, page 255.)

Steam hammer.

Per first mudring:

70–As per sketches Nos. 1, 2, 3, 4, 5 .....
75–As per sketch No. 6 .....
76–As per sketch No. 7 .....
77–As per sketch No. 8 .....
78–As per sketch No. 9 .....
79–As per sketch No. 10 .....
80–As per sketch No. 11 .....
81–As per sketch No. 12 .....
82–As per sketch No. 13 .....

Per mudring after first one:

90–As per sketches Nos. 1, 2, 3, 4, 5 .....
95–As per sketch No. 6 .....
96–As per sketch No. 7 .....
97–As per sketch No. 8 .....
98–As per sketch No. 9 .....
99–As per sketch No. 10 .....
100–As per sketch No. 11 .....
101–As per sketch No. 12 .....
102–As per sketch No. 13 .....

BOILER

Firebox Mud Ring

Firebox

RING, MUD

4R60–16 Scarfed. **Rate**.....

Includes getting sides or ends or halves of mudring after same have been forged, and scarfing ends, bolting up ring and having same ready for welding complete. (See note, page 255.)

Forge.

Per first side or end scarfed:

1–As per sketches Nos. 1, 2, 3, 4, side .....
2–As per sketches Nos. 1, 2, 3, 4, end .....
9–As per sketch No. 5, side .....
10–As per sketch No. 5, front end .....
11–As per sketch No. 5, back end .....
12–As per sketch No. 6, side .....
13–As per sketch No. 6, end .....
14–As per sketch No. 7, side .....
15–As per sketch No. 7, end .....
16–As per sketch No. 8, side .....
17–As per sketch No. 8, end .....
18–As per sketch No. 9, side .....
19–As per sketch No. 9, front end .....
20–As per sketch No. 9, back end .....
21–As per sketch No. 11, side .....
22–As per sketch No. 11, front end .....
23–As per sketch No. 11, back end .....
24–As per sketch No. 12, side .....
25–As per sketch No. 12, end .....

Per side or end scarfed after first one:

30–As per sketches Nos. 1, 2, 3, 4, side .....
31–As per sketches Nos. 1, 2, 3, 4, end .....
38–As per sketch No. 5, side .....
39–As per sketch No. 5, front end .....
40–As per sketch No. 5, back end .....
41–As per sketch No. 6, side .....
42–As per sketch No. 6, end .....
43–As per sketch No. 7, side .....
44–As per sketch No. 7, end .....
45–As per sketch No. 8, side .....
46–As per sketch No. 8, end .....
47–As per sketch No. 9, side .....
48–As per sketch No. 9, front end .....
49–As per sketch No. 9, back end .....
50–As per sketch No. 11, side .....
51–As per sketch No. 11, front end .....
52–As per sketch No. 11, back end .....
53–As per sketch No. 12, side .....
54–As per sketch No. 12, end .....

Firebox

RING, MUD

4R60–16 Scarfed complete. **Rate**.....

Includes doing all necessary scarfing on sides and ends of mudring to make same complete, ready for welding. (See note, page 255.)

Forge.

Per first mudring:

60–As per sketches Nos. 1, 2, 3, 4, 5.....
65–As per sketch No. 6.....
66–As per sketch No. 7.....
67–As per sketch No. 8.....
68–As per sketch No. 9.....
69–As per sketch No. 11.....
70–As per sketch No. 12.....

Per mudring after first one:

75–As per sketches Nos. 1, 2, 3, 4, 5.....
80–As per sketch No. 6.....
81–As per sketch No. 7.....
82–As per sketch No. 8.....
83–As per sketch No. 9.....
84–As per sketch No. 11.....
85–As per sketch No. 12.....

4R60–18 Straightened. **Rate**.....

Includes straightening firebox mudring when same has become bent or twisted. (See note, page 255.)

Forge.

Per first mudring:

1–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12.....
2–As per sketches Nos. 10, 13.....

Per mudring after first one:

20–As per sketches Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12.....
21–As per sketches Nos. 10, 13.....

4R60–21 Welded (parts together) (after ends are scarfed). **Rate**.....

Includes getting sides and ends or halves of mudring after same have been scarfed and bolted up, making welds, dressing and finishing mudring to shape complete. (See note, page 255.)

Forge.

Per first mudring:

1–As per sketches Nos. 1, 2, 3, 4, 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....
8–As per sketch No. 8.....
9–As per sketch No. 9.....
10–As per sketch No. 10.....
11–As per sketch No. 11.....
12–As per sketch No. 12.....
13–As per sketch No. 13.....

BOILER

Firebox Mud Ring

Firebox

RING, MUD

Per mudring after first one:

20–As per sketches Nos. 1, 2, 3, 4, 5 .....
25–As per sketch No. 6 .....
26–As per sketch No. 7 .....
27–As per sketch No. 8 .....
28–As per sketch No. 9 .....
29–As per sketch No. 10 .....
30–As per sketch No. 11 .....
31–As per sketch No. 12 .....
32–As per sketch No. 13 .....

4R60–21 Welded (parts together) (scarfing included). **Rate**.....

Includes getting sides and ends or halves of mudring after same have been forged, doing necessary scarfing, bolting up, welding, dressing and finishing mudring complete. (See note, page 255).

Forge.

Per first mudring:

40–As per sketches Nos. 1, 2, 3, 4, 5 .....
45–As per sketch No. 6 .....
46–As per sketch No. 7 .....
47–As per sketch No. 8 .....
48–As per sketch No. 9 .....
49–As per sketch No. 10 .....
50–As per sketch No. 11 .....
51–As per sketch No. 12 .....
52–As per sketch No. 13 .....

Per mudring after first one:

60–As per sketches Nos. 1, 2, 3, 4, 5 .....
65–As per sketch No. 6 .....
66–As per sketch No. 7 .....
67–As per sketch No. 8 .....
68–As per sketch No. 9 .....
69–As per sketch No. 10 .....
70–As per sketch No. 11 .....
71–As per sketch No. 12 .....
72–As per sketch No. 13 .....

4R60–21 Welded (break). **Rate**.....

Includes doing necessary scarfing of mudring, getting V piece after same has been forged, welding break in mudring, straightening, putting to right length, dressing and finishing over weld complete. Does not include taking side heat on V piece.

Forge.

When V piece is welded in on one side or end of mudring.

Per place repaired:

80–As per sketches Nos. 1, 2, 3, 4, side .....
81–As per sketches Nos. 1, 2, 3, 4, end .....

(Continued on page 260.)

Firebox

RING, MUD

(Continued from page 259.)

88–As per sketch No. 5, side.....
89–As per sketch No. 5, front end.....
90–As per sketch No. 5, back end.....
91–As per sketch No. 6, side.....
92–As per sketch No. 6, end.....
93–As per sketch No. 7, side.....
94–As per sketch No. 7, end.....
95–As per sketch No. 8, side.....
96–As per sketch No. 8, end.....
97–As per sketch No. 9, side.....
98–As per sketch No. 9, front end.....
99–As per sketch No. 9, back end.....
100–As per sketch No. 10, side.....
101–As per sketch No. 10, end.....
102–As per sketch No. 11, side.....
103–As per sketch No. 11, front end.....
104–As per sketch No. 11, back end.....
105–As per sketch No. 12, side.....
106–As per sketch No. 12, end.....
107–As per sketch No. 13, side.....
108–As per sketch No. 13, end.....

When V piece is welded in on both sides or ends of mudring:

Per place repaired:

115–As per sketches Nos. 1, 2, 3, 4, side.....
116–As per sketches Nos. 1, 2, 3, 4, end.....
123–As per sketch No. 5, side.....
124–As per sketch No. 5, front end.....
125–As per sketch No. 5, back end.....
126–As per sketch No. 6, side.....
127–As per sketch No. 6, end.....
128–As per sketch No. 7, side.....
129–As per sketch No. 7, end.....
130–As per sketch No. 8, side.....
131–As per sketch No. 8, end.....
132–As per sketch No. 9, side.....
133–As per sketch No. 9, front end.....
134–As per sketch No. 9, back end.....
135–As per sketch No. 10, side.....
136–As per sketch No. 10, end.....
137–As per sketch No. 11, side.....
138–As per sketch No. 11, front end.....
139–As per sketch No. 11, back end.....
140–As per sketch No. 12, side.....
141–As per sketch No. 12, end.....
142–As per sketch No. 13, side.....
143–As per sketch No. 13, end.....

BOILER

Firebox Mud Ring

Firebox

RING, MUD

Making V piece.

Includes getting material, blocking out and forging V piece for making above welds long enough for two sides:

Steam hammer:

150–Per first V piece.....
151—Per V piece after first one.....

Forge:

155–Per first V piece.....
156–Per V piece after first one.....

Taking side heat on V piece. Includes taking side heat on V piece for making above welds:

160–Per first side heat.....
161–Per side heat after first one.....

4R60-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in mudring, dressing and finishing over weld complete.

Forge.

Per first place repaired:

170–As per sketches Nos. 1, 2, 3, 4, side.....
171–As per sketches Nos. 1, 2, 3, 4, end.....
178–As per sketch No. 5, side.....
179–As per sketch No. 5, front end.....
180–As per sketch No. 5, back end.....
181–As per sketch No. 6, side.....
182–As per sketch No. 6, end.....
183–As per sketch No. 7, side.....
184–As per sketch No. 7, end.....
185–As per sketch No. 8, side.....
186–As per sketch No. 8, end.....
187–As per sketch No. 9, side.....
188–As per sketch No. 9, front end.....
189–As per sketch No. 9, back end.....
190–As per sketch No. 10, side.....
191–As per sketch No. 10, end.....
192–As per sketch No. 11, side.....
193–As per sketch No. 11, front end.....
194–As per sketch No. 11, back end.....
195–As per sketch No. 12, side.....
196–As per sketch No. 12, end.....
197–As per sketch No. 13, side.....
198–As per sketch No. 13, end.....

Firebox

RING, MUD

Per place repaired after first one:

205–As per sketches Nos. 1, 2, 3, 4, side .....
206–As per sketches Nos. 1, 2, 3, 4, end .....
213–As per sketch No. 5, side .....
214–As per sketch No. 5, front end .....
215–As per sketch No. 5, back end .....
216–As per sketch No. 6, side .....
217–As per sketch No. 6, end .....
218–As per sketch No. 7, side .....
219–As per sketch No. 7, end .....
220–As per sketch No. 8, side .....
221–As per sketch No. 8, end .....
222–As per sketch No. 9, side .....
223–As per sketch No. 9, front end .....
224–As per sketch No. 9, back end .....
225–As per sketch No. 10, side .....
226–As per sketch No. 10, end .....
227–As per sketch No. 11, side .....
228–As per sketch No. 11, front end .....
229–As per sketch No. 11, back end .....
230–As per sketch No. 12, side .....
231–As per sketch No. 12, end .....
232–As per sketch No. 13, side .....
233–As per sketch No. 13, end .....

4R60–21 Welded (corners repaired). **Rate** .....

Includes repairing corners of mudring for distance not exceeding 12″ either side of corner, by welding piece on corner for new stock, dressing and finishing corner complete.

Forge.

Per first corner:

240–As per sketches Nos. 1, 2, 3, 4, 5 .....
245–As per sketch No. 6 .....
246–As per sketch No. 7 .....
247–As per sketch No. 8 .....
248–As per sketch No. 9 .....
249–As per sketch No. 10 .....
250–As per sketch No. 11 .....
251–As per sketch No. 12 .....
252–As per sketch No. 13 .....

BOILER

Firebox Mud Ring

Firebox

RING, MUD

Per corner after first one:

260–As per sketches Nos. 1, 2, 3, 4, 5 .....
265–As per sketch No. 6 .....
266–As per sketch No. 7 .....
267–As per sketch No. 8 .....
268–As per sketch No. 9 .....
269–As per sketch No. 10 .....
270–As per sketch No. 11 .....
271–As per sketch No. 12 .....
272–As per sketch No. 13 .....

Per additional 1″ after first 12″:

280–As per sketches Nos. 1, 2, 3, 4, 5 .....
285–As per sketch No. 6 .....
286–As per sketch No. 7 .....
287–As per sketch No. 8 .....
288–As per sketch No. 9 .....
289–As per sketch No. 10 .....
290–As per sketch No. 11 .....
291–As per sketch No. 12 .....
292–As per sketch No. 13 .....

4R60–21 Welded (lugs). **Rate**.....

Includes getting material, forging out lug, doing necessary scarfing, welding lug on mudring, dressing and finishing complete.

Forge.

Per first lug:

300–As per sketch No. 2 .....
301–As per sketch No. 8 .....
302–As per sketch No. 9 .....

Per lug after first one:

306–As per sketch No. 2 .....
307–As per sketch No. 8 .....
308–As per sketch No. 9 .....

4R60–21 Welded (flange or lug repaired). **Rate**.....

Includes welding necessary material on corner of mudring lug or flange, dressing and finishing corner to shape complete, when corner or lug is broken off not over 5″ in length.

Forge.

Per first place repaired:

315–As per sketches Nos. 1, 2, 3, 4, 5, 9, 10, 12 .....

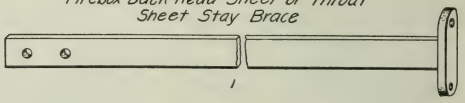
Per place repaired after first one:

330–As per sketches Nos. 1, 2, 3, 4, 5, 9, 10, 12 .....

Firebox

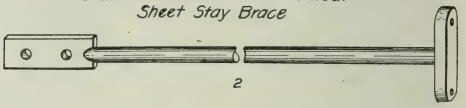
SHEET, BACKHEAD—BRACE, STAY

Firebox Back Head Sheet or Throat Sheet Stay Brace



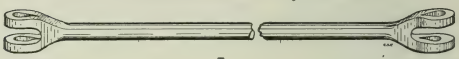
1

Firebox Back Head Sheet or Throat Sheet Stay Brace



2

Firebox Backhead Sheet Stay Brace



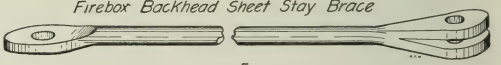
3

Firebox Backhead Sheet Stay Brace



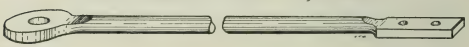
4

Firebox Backhead Sheet Stay Brace



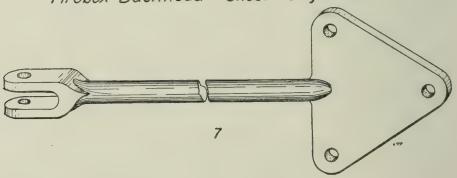
5

Firebox Backhead Sheet Stay Brace



6

Firebox Backhead Sheet Stay Brace



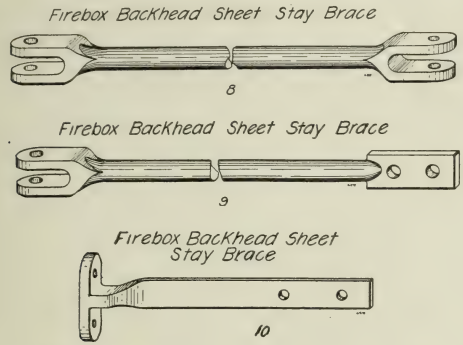
7

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Firebox Backhead Sheet Stay Brace

Firebox

SHEET, BEACKHAD—BRACE, STAY



4R70–2 Bent (ends) (at bulldozer). **Rate**.....

Includes bending iron for tee or jaw end of backhead stay brace at bulldozer after iron has been cut and delivered.

Per first end:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3, per half of jaw..... .....
4–As per sketch No. 4, per half of jaw..... .....
5–As per sketch No. 7..... .....
6–As per sketch No. 8..... .....
7–As per sketch No. 9..... .....
8–As per sketch No. 10..... .....

Per end after first one:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....
14–As per sketch No. 3, per half of jaw..... .....
15–As per sketch No. 4, per half of jaw..... .....
16–As per sketch No. 7..... .....
17–As per sketch No. 8..... .....
18–As per sketch No. 9..... .....
19–As per sketch No. 10..... .....

4R70–4 Cut—Iron (for ends). **Rate**.....

Includes cutting iron for end of backhead stay brace at power shears.

Power shears:

1–Per piece cut, all sketches..... .....

BOILER

Firebox Backhead Sheet Stay Brace

Firebox

SHEET, BACKHEAD—BRACE, STAY

4R70–4 Cut—Iron (for body). **Rate**.....

Includes cutting iron for body of backhead stay brace.

Power shears:

15–Per piece cut, all sketches ....

4R70–9 Forged (end). **Rate**.....

Includes getting material, blocking out and forging end of backhead stay brace complete, ready for dressing.

Steam hammer.

Per first end:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 10..... .....

Per end after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 10..... .....

Forge.

Per first end:

15–As per sketch No. 1, tee end..... .....
16–As per sketch No. 2, tee end..... .....
17–As per sketch No. 2, flat end..... .....
18–As per sketch No. 3, jaw end..... .....
19–As per sketch No. 4, jaw end..... .....
20–As per sketch No. 5, jaw end..... .....
21–As per sketch No. 5, flat end..... .....
22–As per sketch No. 6, flat round end..... .....
23–As per sketch No. 6, flat square end..... .....
24–As per sketch No. 7, jaw end..... .....
25–As per sketch No. 7, flat end..... .....
26–As per sketch No. 8, jaw end..... .....
27–As per sketch No. 9, jaw end..... .....
28–As per sketch No. 9, flat end..... .....
29–As per sketch No. 10, tee end..... .....

Per end after first one:

35–As per sketch No. 1, tee end..... .....
36–As per sketch No. 2, tee end..... .....
37–As per sketch No. 2, flat end..... .....
38–As per sketch No. 3, jaw end..... .....
39–As per sketch No. 4, jaw end..... .....
40–As per sketch No. 4, flat end..... .....
41–As per sketch No. 5, jaw end..... .....
42–As per sketch No. 5, flat end..... .....
43–As per sketch No. 6, flat rounded end..... .....
44–As per sketch No. 6, flat square end..... .....
45–As per sketch No. 7, jaw end..... .....

(Continued on page 267.)

BOILER

Firebox Backhead Sheet Stay Brace

Firebox

SHEET, BACKHEAD—BRACE, STAY

(Continued from page 266.)

46–As per sketch No. 7, flat end ....
47–As per sketch No. 8, jaw end ....
48–As per sketch No. 9, jaw end ....
49–As per sketch No. 9, flat end ....
50–As per sketch No. 10, tee end ....

4R70–9 Forged (end) (at machine). **Rate** .....

Includes changing dies in machine, forging end of backhead stay brace after iron has been cut, bent and delivered to machine.

Machine.

Per first end:

60–As per sketches Nos. 1, 2, 10, tee end ....
62–As per sketches Nos. 3, 4, 5, 7, 8, 9, jaw end ....

Per end after first one:

75–As per sketches Nos. 1, 2, 10, tee end ....
77–As per sketches Nos. 3, 4, 5, 7, 8, 9, jaw end ....

4R70–12 Lengthened or shortened. **Rate** .....

Includes lengthening or shortening backhead stay brace by drawing out or upsetting same.

Forge.

1–Per first brace, all sketches ....
15–Per brace after first one, all sketches ....

4R70–13 Made. **Rate** .....

Includes getting all material, blocking out and forging ends, forming jaw complete of backhead stay brace, welding ends on body, dressing and finishing brace complete.

Forge.

Per first brace:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....
4–As per sketch No. 4 ....
5–As per sketch No. 5 ....
6–As per sketch No. 6 ....
7–As per sketch No. 7 ....
8–As per sketch No. 8 ....
9–As per sketch No. 9 ....
10–As per sketch No. 10 ....

Firebox

SHEET, BACKHEAD—BRACE, STAY

Per brace after first one:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....
18–As per sketch No. 4 .....
19–As per sketch No. 5 .....
20–As per sketch No. 6 .....
21–As per sketch No. 7 .....
22–As per sketch No. 8 .....
23–As per sketch No. 9 .....
24–As per sketch No. 10 .....

4R70–18 Straightened. **Rate**.....

Includes straightening old back head stay brace when same has become bent or twisted.

Forge:

1–Per first brace, all sketches .....
15–Per brace after first one, all sketches .....

4R70–21 Welded (parts together). **Rate**.....

Includes getting backhead stay brace ends and body after same have been forged, doing necessary scarfing, welding ends on body, dressing and finishing brace to shape complete.

Forge:

1–Per first weld in brace, all sketches .....
15–Per weld in brace after first one, all sketches .....

4R70–21 Welded (new end). **Rate**.....

Includes getting new end after same has been forged, welding same on body of old backhead stay brace, dressing and finishing end to shape complete.

Forge.

Per first end:

30–As per sketch No. 1, tee end .....
31–As per sketch No. 1, square end .....
32–As per sketch No. 2, flat end .....
33–As per sketch No. 3, jaw end .....
34–As per sketch No. 4, jaw end .....
35–As per sketch No. 4, flat end .....
36–As per sketch No. 5, jaw end .....
37–As per sketch No. 5, flat end .....
38–As per sketch No. 6, flat rounded end .....
39–As per sketch No. 6, flat square end .....
40–As per sketch No. 7, jaw end .....
41–As per sketch No. 7, flat end .....
42–As per sketch No. 8, jaw end .....
43–As per sketch No. 9, jaw end .....
44–As per sketch No. 10, tee end .....
45–As per sketch No. 10, square end .....

BOILER

Firebox Backhead Sheet Stay Brace

Firebox

SHEET, BACKHEAD—BRACE, STAY

Per end after first one:

50–As per sketch No. 1, tee end.....
51–As per sketch No. 1, square end.....
52–As per sketch No. 2, flat end.....
53–As per sketch No. 3, jaw end.....
54–As per sketch No. 4, jaw end.....
55–As per sketch No. 5, jaw end.....
56–As per sketch No. 5, flat end.....
57–As per sketch No. 6, flat rounded end.....
58–As per sketch No. 6, flat square end.....
59–As per sketch No. 7, jaw end.....
60–As per sketch No. 7, flat end.....
61–As per sketch No. 8, jaw end.....
62–As per sketch No. 9, jaw end.....
63–As per sketch No. 10, tee end.....
64–As per sketch No. 10, square end.....

4R70–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in backhead stay brace, dressing and finishing over weld complete.

Forge.

Per first hole:

70–As per sketch No. 1, tee end.....
71–As per sketch No. 1, square end.....
72–As per sketch No. 2, tee end.....
73–As per sketch No. 2, flat end.....
74–As per sketch No. 4, flat end.....
75–As per sketch No. 5, flat end.....
76–As per sketch No. 6, flat rounded end.....
77–As per sketch No. 6, flat square end.....
78–As per sketch No. 7, flat end.....
79–As per sketch No. 9, flat end.....
80–As per sketch No. 10, tee end.....
81–As per sketch No. 10, square end.....

Per hole after first one:

85–As per sketch No. 1, tee end.....
86–As per sketch No. 1, square end.....
87–As per sketch No. 2, tee end.....
88–As per sketch No. 2, flat end.....
89–As per sketch No. 4, flat end.....
90–As per sketch No. 5, flat end.....
91–As per sketch No. 6, flat rounded end.....
92–As per sketch No. 6, flat square end.....
93–As per sketch No. 7, flat end.....
94–As per sketch No. 8, flat end.....
95–As per sketch No. 9, flat end.....
96–As per sketch No. 10, tee end.....
97–As per sketch No. 10, square end.....

BOILER
Firebox Backhead Sheet Stay Brace

Firebox

SHEET, BACKHEAD—BRACE, STAY

4R70–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in backhead stay brace, dressing and finishing over weld complete.

Forge:

105–Per first place repaired, all sketches..... .....
120–Per place repaired after first one, all sketches..... .....

4R70–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in backhead stay brace, dressing and finishing over weld complete.

Forge:

135–Per first place repaired, all sketches..... .....
150–Per place repaired after first one, all sketches..... .....

BOILER

Firebox Backhead Sheet Stay Brace

Firebox

SHEET, BACKHEAD—BRACE, STAY—END



4R74–6 Dressed. **Rate**.....

Includes dressing and finishing complete, backhead stay brace end.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4R74–9 Forged. **Rate**.....

Includes getting material, blocking out, forging backhead stay brace end complete, ready for dressing.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

3–Per first end..... .....
4–Per end after first one..... .....

4R74–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing backhead stay brace end complete.

Forge:

8–Per first end..... .....
9–Per end after first one..... .....

4R74–18 Straightened. **Rate**.....

Includes straightening old backhead stay brace end when same has become bent or twisted.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4R74–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in backhead stay brace end, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Firebox

SHEET, BACKHEAD—BRACE, STAY—END

4R74–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in backhead stay brace end, dressing and finishing over weld complete.

Forge:

5–Per first hole..... .....

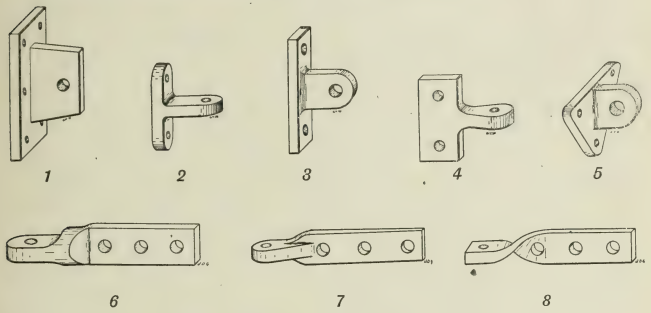
6–Per hole after first one..... .....

BOILER

Firebox Backhead Sheet Stay Brace End

Firebox

SHEET, BACKHEAD—BRACE, STAY—LUG



4R78–6 Dressed. **Rate**.....

Includes dressing ends and finishing complete, backhead stay brace lug after lug has been forged.

Forge.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....
7–As per sketch No. 7..... .....

Per lug after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....
15–As per sketch No. 6..... .....
16–As per sketch No. 7..... .....

Firebox

SHEET, BACKHEAD—BRACE, STAY—LUG

4R78–9 Forged. **Rate**.....

Includes getting material, blocking out and forging backhead stay brace lug complete, ready for dressing.

Steam hammer.

Per first lug:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....

Per lug after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....
15–As per sketch No. 6.....
16–As per sketch No. 7.....

Forge.

Per first lug:

19–As per sketch No. 1.....
20–As per sketch No. 2.....
21–As per sketch No. 3.....
22–As per sketch No. 4.....
23–As per sketch No. 5.....
24–As per sketch No. 6.....
25–As per sketch No. 7.....

Per lug after first one:

28–As per sketch No. 1.....
29–As per sketch No. 2.....
30–As per sketch No. 3.....
31–As per sketch No. 4.....
32–As per sketch No. 5.....
33–As per sketch No. 6.....
34–As per sketch No. 7.....

BOILER

Firebox Backhead Sheet Stay Brace Lug

Firebox

SHEET, BACKHEAD—BRACE, STAY—LUG

4R78–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, backhead stay brace lug.

Forge.

Per first lug:

40–As per sketch No. 1..... .....
41–As per sketch No. 2..... .....
42–As per sketch No. 3..... .....
43–As per sketch No. 4..... .....
44–As per sketch No. 5..... .....
45–As per sketch No. 6..... .....
46–As per sketch No. 7..... .....
47–As per sketch No. 8..... .....

Per lug after first one:

50–As per sketch No. 1..... .....
51–As per sketch No. 2..... .....
52–As per sketch No. 3..... .....
53–As per sketch No. 4..... .....
54–As per sketch No. 5..... .....
55–As per sketch No. 6..... .....
56–As per sketch No. 7..... .....
57–As per sketch No. 8..... .....

4R78–18 Straightened. **Rate**.....

Includes straightening old backhead stay brace lug when same has become bent.

Forge:

1–Per first lug, all sketches..... .....
12–Per lug after first one, all sketches..... .....

4R78–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in backhead stay brace lug, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....
7–As per sketch No. 7..... .....
8–As per sketch No. 8..... .....

Firebox

SHEET, BACKHEAD—BRACE, STAY—LUG

Per lug after first one:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....
15–As per sketch No. 4 .....
16–As per sketch No. 5 .....
17–As per sketch No. 6 .....
18–As per sketch No. 7 .....
19–As per sketch No. 8 .....

4R78–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in backhead stay brace lug, dressing and finishing over weld complete.

Forge.

25–Per first hole, all sketches .....
36–Per hole after first one, all sketches .....

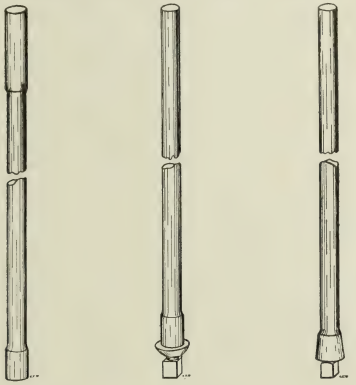
BOILER

Firebox Backhead Sheet Stay Brace Lug

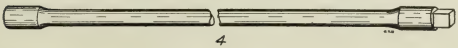
Firebox

SHEET, CROWN—BOLT, RADIAL STAY

Firebox Crown Sheet Radial Staybolts



Firebox Crown Sheet Radial Stay Bolt



4R86–4 Cut—Iron. **Rate**.....

Includes cutting iron for crown sheet radial stay bolt at power shears.

Power shears:

1–Per piece cut..... .....

4R86–13 Made (at forge). **Rate**.....

Includes getting material, forging end of crown sheet radial stay bolt, welding same on bolt rod, dressing and finishing bolt to shape complete.

Forge.

Per first end:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Firebox

SHEET, CROWN—BOLT, RADIAL STAY

Per end after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....

4R86-13 Made (at machine). **Rate**.....

Includes changing dies in forging machine, forging crown sheet radial stay bolt complete, after iron has been delivered at machine.

Machine.

Per first end:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....
18–As per sketch No. 4 .....

Per end after first one:

24–As per sketch No. 1 .....
25–As per sketch No. 2 .....
26–As per sketch No. 3 .....
27–As per sketch No. 4 .....

4R86-21 Welded (to adjust length). **Rate**.....

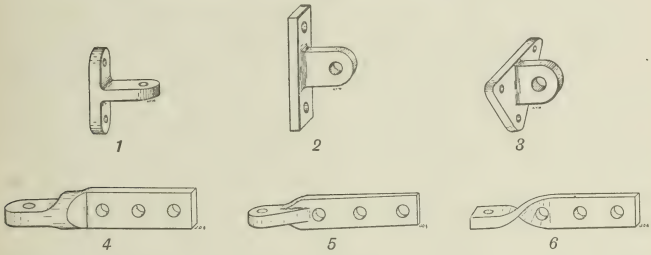
Includes welding in necessary stock on crown sheet radial stay bolt to adjust bolt to length complete.

Forge:

1–Per first bolt, all sketches .....
8–Per bolt after first one, all sketches .....

Firebox

SHEET, CROWN—BRACE, STAY—LUG



4R90-6 Dressed. **Rate**.....

Includes dressing ends and finishing complete, crown sheet stay brace lug after lug has been forged.

Forge.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per lug after first one:

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....
10–As per sketch No. 3..... .....
11–As per sketch No. 4..... .....
12–As per sketch No. 5..... .....

4R90-9 Forged. **Rate**.....

Includes getting material for crown sheet stay brace lug, blocking out and forging complete, ready for dressing.

Steam hammer.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Firebox

SHEET, CROWN—BRACE, STAY—LUG

Per lug after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....
12–As per sketch No. 5 .....

Forge.

Per first lug:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....
18–As per sketch No. 4 .....
19–As per sketch No. 5 .....

Per lug after first one:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....
28–As per sketch No. 4 .....
29–As per sketch No. 5 .....

4R90–9 Forged and dressed. **Rate**.....

Includes getting material for crown sheet stay brace lug, blocking out, forging, dressing and finishing complete.

Forge.

Per first lug:

35–As per sketch No. 1 .....
36–As per sketch No. 2 .....
37–As per sketch No. 3 .....
38–As per sketch No. 4 .....
39–As per sketch No. 5 .....
40–As per sketch No. 6 .....

Per lug after first one:

45–As per sketch No. 1 .....
46–As per sketch No. 2 .....
47–As per sketch No. 3 .....
48–As per sketch No. 4 .....
49–As per sketch No. 5 .....
50–As per sketch No. 6 .....

4R90–18 Straightened. **Rate**.....

Includes straightening old crown sheet stay brace lug when same has become bent.

Forge:

1–Per first lug, all sketches .....
10–Per lug after first one, all sketches .....

BOILER

Firebox—Crown Sheet Stay Brace Lug

Firebox

SHEET, CROWN—BRACE, STAY—LUG

4R90-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in crown sheet stay brace lug, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....

Per place repaired after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....
15–As per sketch No. 6..... .....

4R90-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in crown sheet stay brace lug, dressing and finishing over weld complete.

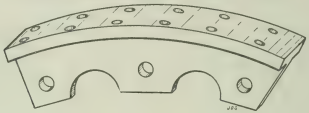
Forge.

20–Per first hole, all sketches..... .....
30–Per hole after first one, all sketches..... .....

Firebox

SHEET, CROWN—TEE IRON

Firebox Crown Sheet Tee Iron



4R100-2 Bent. **Rate**.....

Includes bending crown sheet tee iron to shape to fit crown sheet.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

3–Per first end..... .....
4–Per end after first one..... .....

4R100-4 Cut—Ends. **Rate**.....

Includes cutting off ends of crown sheet tee iron.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

3–Per first end..... .....
4–Per end after first one..... .....

4R100-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in crown sheet tee iron, dressing and finishing over weld complete.

Forge:

1–Per first hole plugged..... .....
2–Per hole plugged after first one..... .....

BOILER

Firebox Crown Sheet Tee Iron

Firebox

SHEET, THROAT—BRACE, STAY—END

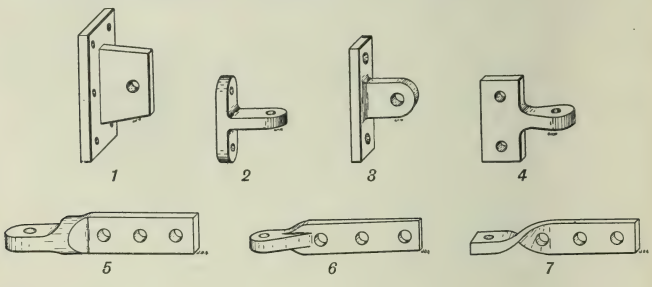


4R114 Note.

For operations on throat sheet stay brace end, see Schedule No. 4R10, under dome brace end.

Firebox

SHEET, THROAT—BRACE, STAY—LUG



4R118 Note.

For operations on throat sheet stay brace lug, see Schedule No. 4R78, under backhead stay brace lug.

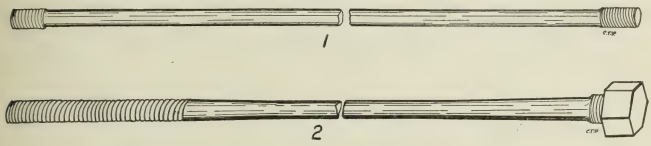
BOILER

Firebox Throat Sheet Stay Brace Lug

Firebox

STAY, LONGITUDINAL

Transverse or Longitudinal Screw Stay Rods



4R126–4 Cut—Iron. **Rate**.....

Includes cutting iron for heads of longitudinal stay at power shears.

Power shears:

1–Per piece cut..... .....

4R126–6 Dressed (body of rod). **Rate**.....

Includes forging down, rounding up and dressing complete, firebox longitudinal stay rod after ends have been made.

Steam hammer:

1–Per first rod..... .....

2–Per rod after first one..... .....

Forge:

3–Per first rod..... .....

4–Per rod after first one..... .....

4R126–13 Made (at forge). **Rate**.....

Includes getting material, forging end of logitudinal stay, welding same on stay rod, dressing and finishing stay to shape complete.

Forge.

Per first stay:

1–As per sketch No. 1..... .....

Per stay after first one:

5–As per sketch No. 1..... .....

Firebox

STAY, LONGITUDINAL

4R126–13 Made (at machine). **Rate**.....

Includes changing dies in forging machine, forging heads for longitudinal stay complete, after iron has been delivered to machine.

Machine.

Per first head:

8–As per sketch No. 1..... .....

Per head after first one:

12–As per sketch No. 1..... .....

4R126–21 Welded (to adjust length). **Rate**.....

Includes welding in necessary stock on longitudinal stay to adjust stay to length complete.

Forge.

Per first weld in stay:

1–As per sketch No. 1..... .....

Per weld in stay after first one:

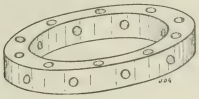
5–As per sketch No. 1..... .....

BOILER

Firebox Longitudinal Stay

Mud Drum
RING

Mud Drum Ring



4R150–6 Dressed and welded. **Rate**.....

Includes dressing mud drum ring after same has been forged, or getting bar iron, doing necessary scarfing, making weld and finishing ring complete.

Forge.

Per first ring:

1–As per sketch No. 1..... .....

Per ring after first one:

5–As per sketch No. 1..... .....

4R150–9 Forged. **Rate**.....

Includes getting material, blocking out and forging iron complete for mud drum ring.

Steam hammer.

Per first ring:

1–As per sketch No. 1..... .....

Per ring after first one:

5–As per sketch No. 1..... .....

Forge.

Per first ring:

8–As per sketch No. 1..... .....

Per ring after first one:

12–As per sketch No. 1..... .....

4R150–9 Forged and dressed. **Rate**.....

Includes getting material for mud drum ring, blocking out, forging, welding and dressing complete.

Forge.

Per first ring:

16–As per sketch No. 1..... .....

Per ring after first one:

18–As per sketch No. 1..... .....

Mud Drum
RING

4R150–13 Made complete (from solid slab). **Rate**.....

Includes getting material, blocking out and forging slab, cutting out hole, and trimming mud drum ring to shape complete.

Steam hammer.

Per first ring:

1–As per sketch No. 1..... .....

Per ring after first one:

5–As per sketch No. 1..... .....

4R150–18 Straightened. **Rate**.....

Includes straightening old mud drum ring when same has become bent or twisted.

Forge.

Per first ring:

1–As per sketch No. 1..... .....

Per ring after first one:

5–As per sketch No. 1..... .....

4R150–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in mud drum ring, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....

4R150–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in mud drum ring, dressing and finishing over weld complete.

Forge.

Per first place repaired:

8–As per sketch No. 1..... .....

Per place repaired after first one:

12–As per sketch No. 1..... .....

BOILER
Mud Drum Ring

Mud Drum
RING

4R150–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in mud drum ring, dressing and finishing over weld complete.

Forge.

Per first hole:

16–As per sketch No. 1..... .....

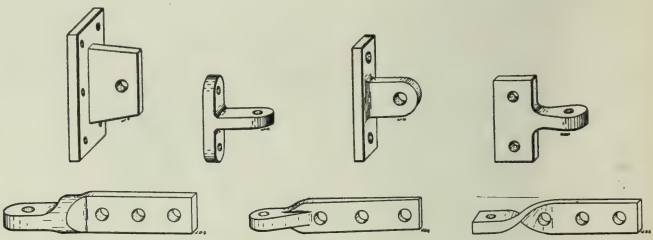
Per hole after first one:

20–As per sketch No. 1..... .....

BOILER
Mud Drum Ring

Sheet, Front Flue

BRACE LUG



4R200 Note.

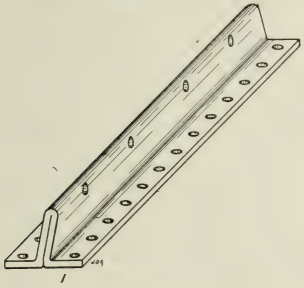
For operations on front flue sheet brace lug, see Schedule No. 4R78, under backhead stay brace lug.

BOILER

Sheet, Front Flue—Brace Lug

Sheet, Front Flue
TEE IRON

Front Flue Sheet Tee Iron



4R210–18 Straightened. **Rate**.....

Includes straightening old front flue sheet tee iron when same has become bent.

Forge:

1–Per first tee iron..... .....
2–Per tee iron after first one..... .....

4R210–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in front flue sheet tee iron, dressing and finishing over weld complete.

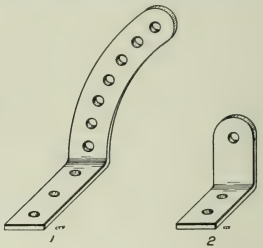
Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Smoke Box

DAMPER QUADRANT

Smoke Box Damper Quadrants



4R240–2 Bend changed. **Rate**.....

Includes changing bend in smoke box damper quadrant.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bend changed after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4R240–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening smoke box damper quadrant by drawing out or upsetting same.

Forge.

Per first leg lengthened or shortened:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per leg lengthened or shortened after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

BOILER

Smoke Box Damper Quadrant

Smoke Box

DAMPER QUADRANT

4R240–13 Made. **Rate**.....

Includes getting material for smoke box damper quadrant, bending, dressing and finishing complete.

Forge.

Per first quadrant:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per quadrant after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4R240–18 Straightened. **Rate**.....

Includes straightening old smoke box damper quadrant when same has become bent.

Forge.

Per first quadrant:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per quadrant after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4R240–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in smoke box damper quadrant, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Smoke Box

DAMPER QUADRANT

4R240–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in smoke box damper quadrant, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4R240–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in smoke box damper quadrant, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....

Per hole after first one:

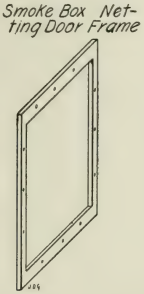
25–As per sketch No. 1..... .....
26–As per sketch No. 2..... .....

BOILER

Smoke Box Damper Quadrant

Smoke Box

NETTING DOOR FRAME



4R250–13 Made. **Rate**.....

Includes getting material for smoke box netting door frame, forging, bending, welding, dressing and finishing complete.

Forge:

1–Per first frame..... .....
2–Per frame after first one..... .....

4R250–18 Straightened. **Rate**.....

Includes straightening old smoke box netting door frame when same has become bent or twisted.

Forge:

1–Per first frame..... .....
2–Per frame after first one..... .....

4R250–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in smoke box netting door frame, dressing and finishing over weld complete.

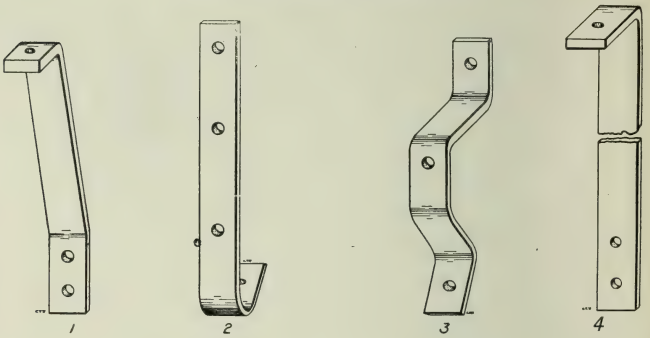
Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

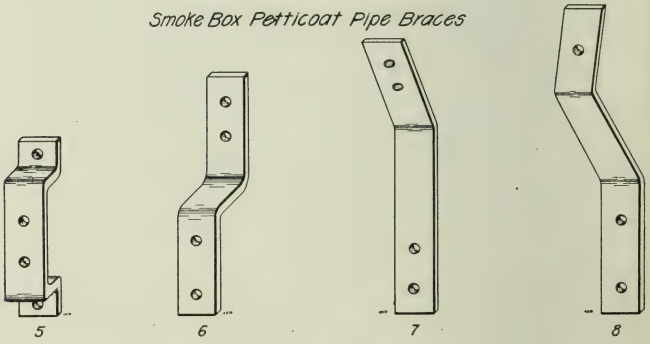
Smoke Box

PIPE, PETTICOAT—BRACE

Smoke Box Petticoat Pipe Braces



Smoke Box Petticoat Pipe Braces



4R260–2 Bend changed. **Rate**.....

Includes changing bend in petticoat pipe brace.

Forge:

1–Per first bend changed, all sketches..... .....
12–Per bend changed after first one, all sketches..... .....

BOILER

Smoke Box Petticoat Pipe Brace

Smoke Box

PIPE, PETTICOAT—BRACE

4R260–4 Cut—Iron. **Rate**.....

Includes cutting at power shears iron for petticoat pipe brace.

Power shears:

1–Per piece cut..... .....

4R260–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening petticoat pipe brace by drawing out or upsetting same.

Forge:

1–Per first brace, all sketches..... .....
12–Per brace after first one, all sketches..... .....

4R260–13 Made. **Rate**.....

Includes getting material for petticoat pipe brace, forging, bending, dressing and finishing complete.

Forge.

Per first brace:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....
7–As per sketch No. 7..... .....
8–As per sketch No. 8..... .....

Per brace after first one:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....
14–As per sketch No. 3..... .....
15–As per sketch No. 4..... .....
16–As per sketch No. 5..... .....
17–As per sketch No. 6..... .....
18–As per sketch No. 7..... .....
19–As per sketch No. 8..... .....

4R260–18 Straightened. **Rate**.....

Includes straightening old petticoat pipe brace when same has become bent or twisted.

Forge:

1–Per first brace, all sketches..... .....
12–Per brace after first one, all sketches..... .....

Smoke Box

PIPE, PETTICOAT—BRACE

4R260–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in petticoat pipe brace, dressing and finishing over weld complete.

Forge:

1–Per first place repaired, all sketches..... .....
12–Per place repaired after first one, all sketches..... .....

4R260–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in petticoat pipe brace, dressing and finishing over weld complete.

Forge:

25–Per first place repaired, all sketches..... .....
36–Per place repaired after first one, all sketches..... .....

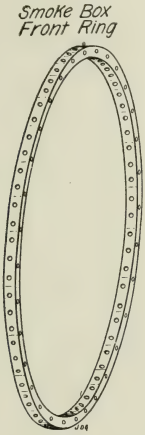
4R260–2 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in petticoat pipe brace, dressing and finishing over weld complete.

Forge:

50–Per first hole plugged, all sketches..... .....
60–Per hole plugged after first one, all sketches..... .....

Smoke Box
RING, FRONT



4R270–6 Dressed and welded. **Rate**.....

Includes rounding up smoke box front ring, welding and finishing ring complete, after same has been scarfed and rolled.

Forge.

Per first ring:

1–Ring made from 2″ square iron or less..... .....
2–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron..... .....
3–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron..... .....
4–Ring made from $2\frac{3}{4}$″ or 3″ square iron..... .....

Per ring after first one:

8–Ring made from 2″ square iron ....
9–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron..... .....
10–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron..... .....
11–Ring made from $2\frac{3}{4}$″ or 3″ square iron..... .....

Smoke Box

RING, FRONT

4R270–9 Forged. **Rate**.....

Includes getting material for smoke box front ring, blocking out and forging complete, ready for rolling.

Steam hammer.

Per first ring:

1–Ring made from 2″ square iron or less.....
2–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron.....
3–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron.....
4–Ring made from $2\frac{3}{4}$″ or 3″ square iron.....

Per ring after first one:

8–Ring made from 2″ square iron.....
9–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron.....
10–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron.....
11–Ring made from $2\frac{3}{4}$″ or 3″ square iron.....

4R270–12 Lengthened (by welding) (before made complete). **Rate**.....

Includes taking forging for smoke box front ring when same is not long enough to make ring, and welding out to necessary length. Does not include scarfing.

Forge.

Per first ring:

1–Ring made from 2″ square iron or less.....
2–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron.....
3–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron.....
4–Ring made from $2\frac{3}{4}$″ or 3″ square iron.....

Per ring after first one:

8–Ring made from 2″ square iron.....
9–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron.....
10–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron.....
11–Ring made from $2\frac{3}{4}$″ or 3″ square iron.....

4R270–13 Made complete (from bar iron or forged iron). **Rate**.....

Includes getting bar iron or iron which has been forged for smoke box front ring, scarfing, bending, rounding up, welding and finishing ring complete.

Forge.

Per first ring:

1–Ring made from 2″ square iron or less.....
2–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron.....
3–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron.....
4–Ring made from $2\frac{3}{4}$″ or 3″ square iron.....
5–Ring made from over 3″ square iron.....

BOILER

Smoke Box Front Ring

Smoke Box
RING, FRONT

Per ring after first one:
- 8–Ring made from 2″ square iron .....
- 9–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron .....
- 10–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron .....
- 11–Ring made from $2\frac{3}{4}$″ or 3″ square iron .....
- 12–Ring made from over 3″ square iron .....

4R270–16 Scarfed. **Rate**.....

Includes scarfing smoke box front ring complete, ready for welding, after ring has been forged.

Forge.

Per first ring:
- 1–Ring made from 2″ square iron or less .....
- 2–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron .....
- 3–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron .....
- 4–Ring made from $2\frac{3}{4}$″ or 3″ square iron .....

Per ring after first one:
- 8–Ring made from 2″ square iron .....
- 9–Ring made from $2\frac{1}{8}$″ or $2\frac{1}{4}$″ square iron .....
- 10–Ring made from $2\frac{3}{8}$″ or $2\frac{1}{2}$″ square iron .....
- 11–Ring made from $2\frac{3}{4}$″ or 3″ square iron .....

4R270–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in smoke box front ring, dressing and finishing over weld complete.

Forge:
- 1–Per first place repaired .....
- 2–Per place repaired after first one .....

4R270–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in smoke box front ring, dressing and finishing over weld complete.

Forge:
- 5–Per first place repaired .....
- 6–Per place repaired after first one .....

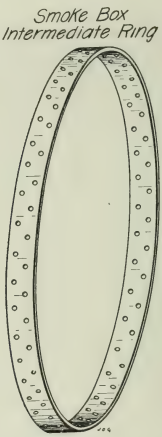
4R270–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in smoke box front ring, dressing and finishing over weld complete.

Forge:
- 9–Per first hole .....
- 10–Per hole after first one .....

Smoke Box

RING, INTERMEDIATE



4R276–6 Dressed and welded. **Rate**.....

Includes getting smoke box intermediate ring after same has been forged, or getting necessary bar iron, doing necessary scarfing, rounding up ring, welding and finishing complete.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R276–9 Forged. **Rate**.....

Includes getting material, blocking out and forging iron box for smoke intermediate ring, complete.

Steam hammer:

1–Per first ring..... .....
2–Per ring after first one..... .....

BOILER

Smoke Box Intermediate Ring

Smoke Box

RING, INTERMEDIATE

4R276–12 Lengthened (by welding) (before made complete.) **Rate**.....

Includes taking forging for smoke box intermediate ring when same is not long enough to make ring, and welding out to necessary length. Does not include scarfing.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R276–16 Scarfed. **Rate**.....

Includes scarfing smoke box intermediate ring complete, ready for welding.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R276–18 Straightened. **Rate**.....

Includes straightening old smoke box intermediate ring when same has become bent or twisted.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R276–21 Welded (after scarfed and rolled). **Rate**.....

Includes getting smoke box intermediate ring after same has been scarfed and rolled, rounding up, welding and finishing ring complete.

Forge:

1–Per first ring..... .....
2–Per ring after first one..... .....

4R276–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in smoke box intermediate ring, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4R276–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in smoke box intermediate ring, dressing and finishing over weld complete.

Forge:

10–Per first place repaired..... .....
11–Per place repaired after first one..... .....

Smoke Box

RING, INTERMEDIATE

4R276–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in smoke box intermediate ring, dressing and finishing over weld complete.

Forge:

15–Per first hole..... .....

16–Per hole after first one..... .....

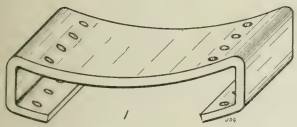
BOILER

Smoke Box Intermediate Ring

Smoke Box

SUPERHEATER SUPPORT

Superheater Supports



4R290–2 Bend changed. **Rate**.....

Includes changing bend in smoke box superheater support.

Forge.

Per bend first changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, support less than 6″ long..... .....
3–As per sketch No. 2, support 6″ to 12″ long incl..... .....
4–As per sketch No. 2, support over 12″ long..... .....
5–As per sketch No. 3, support less than 6″ long..... .....
6–As per sketch No. 3, support 6″ to 12″ long incl..... .....
7–As per sketch No. 3, support over 12″ long..... .....

Per bend changed after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2, support less than 6″ long..... .....
12–As per sketch No. 2, support 6″ to 12″ long incl..... .....
13–As per sketch No. 2, support over 12″ long..... .....
14–As per sketch No. 3, support less than 6″ long..... .....
15–As per sketch No. 3, support 6″ to 12″ long incl..... .....
16–As per sketch No. 3, support over 12″ long..... .....

4R290–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for smoke box superheater support.

Power shears:

1–Per piece cut..... .....

4R290–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening smoke box superheater support by drawing out or upsetting same.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, support less than 6″ long..... .....
3–As per sketch No. 2, support 6″ to 12″ long incl..... .....
4–As per sketch No. 2, support over 12″ long..... .....
5–As per sketch No. 3, support less than 6″ long..... .....
6–As per sketch No. 3, support 6″ to 12″ long incl..... .....
7–As per sketch No. 3, support over 12″ long..... .....

BOILER

Smoke Box Superheater Support

Smoke Box

SUPERHEATER SUPPORT

Per support after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2, support less than 6" long.....
12–As per sketch No. 2, support 6" to 12" long incl.....
13–As per sketch No. 2, support over 12" long.....
14–As per sketch No. 3, support less than 6" long.....
15–As per sketch No. 3, support 6" to 12" long incl.....
16–As per sketch No. 3, support over 12" long.....

4R290–13 Made. **Rate**.....

Includes getting material for smoke box superheater support, blocking out, forging, bending, dressing and finishing complete.

Forge.

Per first support:

1–As per sketch No. 1.....
2–As per sketch No. 2, support less than 6" long.....
3–As per sketch No. 2, support 6" to 12" long incl.....
4–As per sketch No. 2, support over 12" long.....
5–As per sketch No. 3, support less than 6" long.....
6–As per sketch No. 3, support 6" to 12" long incl.....
7–As per sketch No. 3, support over 12" long.....

Per support after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2, support less than 6" long.....
12–As per sketch No. 2, support 6" to 12" long incl.....
13–As per sketch No. 2, support over 12" long.....
14–As per sketch No. 3, support less than 6" long.....
15–As per sketch No. 3, support 6" to 12" long incl.....
16–As per sketch No. 3, support over 12" long.....

4R290–18 Straightened. **Rate**.....

Includes straightening old smoke box superheater support when same has become bent or twisted.

Forge.

Per first support:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per support after first one:

5–As per sketch No. 1.....
6–As per sketch No. 2.....
7–As per sketch No. 3.....

BOILER

Smoke Box Superheater Support

Smoke Box

SUPERHEATER SUPPORT

4R290–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in smoke box superheater support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2, support less than 6″ long.....
3–As per sketch No. 2, support 6″ to 12″ long incl.....
4–As per sketch No. 2, support over 12″ long.....
5–As per sketch No. 3, support less than 6″ long.....
6–As per sketch No. 3, support 6″ to 12″ long incl.....
7–As per sketch No. 3, support over 12″ long.....

Per place repaired after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2, support less than 6″ long.....
12–As per sketch No. 2, support 6″ to 12″ long incl.....
13–As per sketch No. 2, support over 12″ long.....
14–As per sketch No. 3, support less than 6″ long.....
15–As per sketch No. 3, support 6″ to 12″ long incl.....
16–As per sketch No. 3, support over 12″ long.....

4R290–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in smoke box superheater support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

20–As per sketch No. 1.....
21–As per sketch No. 2, support less than 6″ long.....
22–As per sketch No. 2, support 6″ to 12″ long incl.....
23–As per sketch No. 2, support over 12″ long.....
24–As per sketch No. 3, support less than 6″ long.....
25–As per sketch No. 3, support 6″ to 12″ long incl.....
26–As per sketch No. 3, support over 12″ long.....

Per place repaired after first one:

30–As per sketch No. 1.....
31–As per sketch No. 2, support less than 6″ long.....
32–As per sketch No. 2, support 6″ to 12″ long incl.....
33–As per sketch No. 2, support over 12″ long.....
34–As per sketch No. 3, support less than 6″ long.....
35–As per sketch No. 3, support 6″ to 12″ long incl.....
36–As per sketch No. 3, support over 12″ long.....

Smoke Box

SUPERHEATER SUPPORT

4R290–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in smoke box superheater support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

40–As per sketch No. 1..... .....
41–As per sketch No. 2..... .....
42–As per sketch No. 3..... .....

Per place repaired after first one:

45–As per sketch No. 1..... .....
46–As per sketch No. 2..... .....
47–As per sketch No. 3..... .....

BOILER

Smoke Box Superheater Support

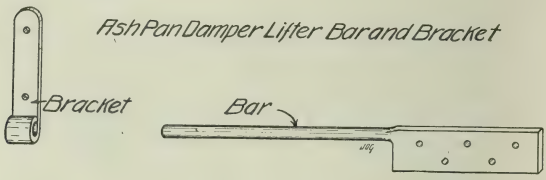
ASH PAN AND GRATE RIGGING

ASH PAN AND GRATE RIGGING

ASH PANS—GENERAL ARRANGEMENT

Damper

BAR, LIFTER



4S10–13 Made. **Rate**.....

Includes getting material, blocking out and forging ash pan damper lifter bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4S10–18 Straightened. **Rate**.....

Includes straightening old ash pan damper lifter bar when same has become bent.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4S10–21 Welded—new rounded end. **Rate**.....

Includes getting material and welding new rounding end on ash pan damper lifter bar, dressing and finishing end complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

ASH PAN

Damper Lifter Bar

Damper

BAR, LIFTER—BRACKET

4S14–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing ash pan damper lifter bar bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S14–18 Straightened. **Rate**.....

Includes straightening old ash pan damper lifter bar bracket when same has become bent.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S14–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan damper lifter bar bracket, dressing and finishing over weld complete.

Forge:

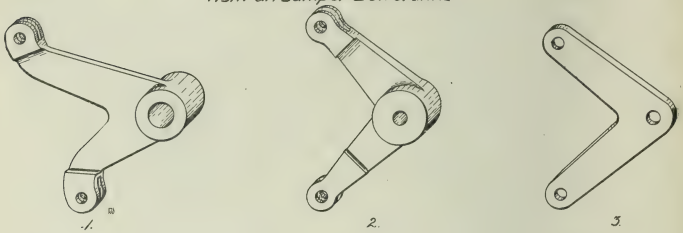
1–Per first hole..... .....
2–Per hole after first one..... .....

ASH PAN
Damper Lifter Bar Bracket

Damper

CRANK, BELL

Ash Pan Damper Bell Cranks



4S18–6 Dressed. **Rate**.....

Includes cutting jaws, dressing and finishing ash pan damper bell crank complete after same has been forged.

Forge.

Per first bell crank:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bell crank after first one:

3–As per sketch No. 1..... .....
4–As per sketch No. 2..... .....

4S18–9 Forged. **Rate**.....

Includes getting material, blocking out and forging ash pan damper bell crank complete.

Steam hammer.

Per first bell crank:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bell crank after first one:

3–As per sketch No. 1..... .....
4–As per sketch No. 2..... .....

Forge.

Per first bell crank:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

Per bell crank after first one:

11–As per sketch No. 1..... .....
12–As per sketch No. 2..... .....

ASH PAN

Damper Bell Crank

Damper

CRANK, BELL

4S18-12 Lengthened or shortened—by drawing out or upsetting. **Rate**.....

Includes lengthening or shortening ash pan damper bell crank arm by drawing out or upsetting same.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S18-12 Lengthened—by welding. **Rate**.....

Includes cutting ash pan damper bell crank arm, welding in required stock and dressing to length complete.

Forge:

7–Per first arm..... .....
8–Per arm after first one..... .....

4S18-13 Made. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing ash pan damper bell crank complete.

Forge.

Per first bell crank:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per bell crank after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4S18-18 Straightened. **Rate**.....

Includes straightening old ash pan damper bell crank when same has become bent.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S18-21 Welded—break. **Rate**.....

Includes doing necessary scarfing welding break in ash pan damper bell crank, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Damper

CRANK, BELL

4S18–21 Welded—crack. **Rate**.....

Includes making dutchman, welding same in crack in ash pan damper bell crank, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4S18–21 Welded—new jaw end—making included. **Rate**.....

Includes getting material and making new jaw end for ash pan damper bell crank arm, welding same on arm, dressing and finishing complete.

Forge:

13–Per first jaw end..... .....
14–Per jaw end after first one..... .....

4S18–21 Welded—new straight end—making included. **Rate**.....

Includes getting material, welding new straight end on ash pan damper bell crank arm, dressing and finishing arm to shape complete.

Forge:

19–Per first straight end..... .....
20–Per straight end after first one..... .....

4S18–21 Welded—holes plugged. **Rate**.....

Includes making plug, welding same in hole in ash pan damper bell crank, dressing and finishing over weld complete.

Forge.

Per first hole:

25–In boss end..... .....
26–In jaw end..... .....
27–In straight end..... .....

Per hole after first one:

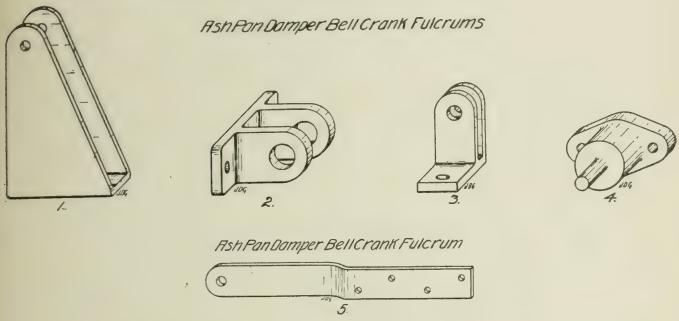
28–In boss end..... .....
29–In jaw end..... .....
30–In straight end..... .....

ASH PAN

Damper Bell Crank

Damper

CRANK, BELL—FULCRUM



4S22–2 Bend changed. **Rate**.....

Includes changing bend in ash pan damper bell crank fulcrum.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S22–13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing ash pan bell crank fulcrum complete.

Forge.

Per first fulcrum:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per fulcrum after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....

Damper

CRANK, BELL—FULCRUM

4S22-18 Straightened. **Rate**.....

Includes straightening old ash pan damper bell crank fulcrum when same has become bent.

Forge.

Per first fulcrum:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....

Per fulcrum after first one:

11–As per sketch No. 1..... .....
12–As per sketch No. 2..... .....
13–As per sketch No. 3..... .....
14–As per sketch No. 4..... .....
15–As per sketch No. 5..... .....

4S22-21 Welded—break. **Rate**.....

Includes doing necessary scarfing, welding break in ash pan damper bell crank fulcrum, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S22-21 Welded—crack. **Rate**.....

Includes making dutchman, welding same in crack in ash pan damper bell crank fulcrum, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4S22-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan damper bell crank fulcrum, dressing and finishing over weld complete.

Forge:

13–Per first hole..... .....
14–Per hole after first one..... .....

ASH PAN

Damper Bell Crank Fulcrum

Damper

DOOR HINGE



4S26-13 Made—complete. **Rate**.....

Includes getting material, blocking out, forging and dressing both eye and shaft parts of ash pan damper door hinge.

Forge:

1–Per first hinge complete..... .....
2–Per hinge complete after first one..... .....

4S26-13 Made—shaft part only. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing shaft part of ash pan damper door hinge.

Forge:

7–Per first shaft part..... .....
8–Per shaft part after first one..... .....

4S26-13 Made—eye part. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, eye part of ash pan damper door hinge.

Forge:

13–Per first eye part..... .....
14–Per eye part after first one..... .....

4S26-18 Straightened. **Rate**.....

Includes straightening either eye part or shaft part of ash pan damper door hinge when same has become bent.

Forge:

1–Per first part straightened..... .....
2–Per part straightened after first one..... .....

ASH PAN

Damper Door Hinge

Damper

DOOR HINGE

4S26–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in either eye part or shaft part of ash pan damper door hinge, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....

2–Per hole after first one..... .....

ASH PAN

Damper Door Hinge

Damper
FASTENER



4S34-13 Made. **Rate**.....

Includes getting material, dressing and finishing complete, ash pan damper fastener.

Forge:
1–Per first fastener..... .....
2–Per fastener after first one..... .....

4S34-18 Straightened. **Rate**.....

Includes straightening old ash pan damper fastener when same has become bent.

Forge:
1–Per first fastener..... .....
2–Per fastener after first one..... .....

4S34-21 Welded (holes plugged). **Rate**.....

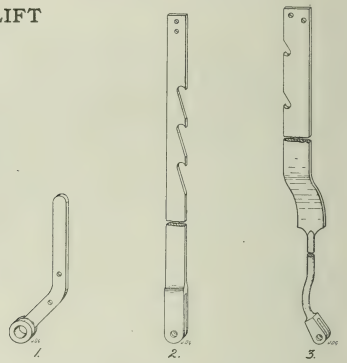
Includes making plug, welding same in hole in ash pan damper fastener, dressing and finishing over weld complete.

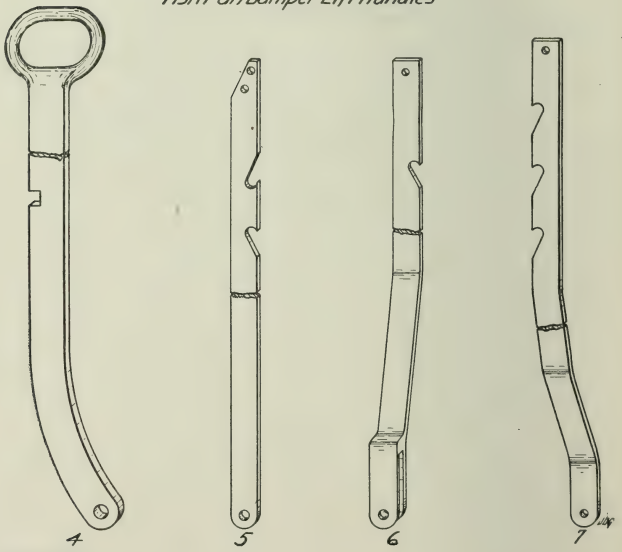
Forge:
1–Per first hole..... .....
2–Per hole after first one..... .....

ASH PAN
Damper Fastener

Damper

HANDLE, LIFT





ASH PAN

Damper Lift Handle

Damper

HANDLE, LIFT

4S38-2 Bend changed. **Rate**.....

Includes changing bend in ash pan damper lift handle.

Forge:

1–Per first bend changed..... .....

2–Per bend changed after first one..... .....

4S38-13 Made. **Rate**.....

Includes getting material, blocking out, doing necessary welding, dressing and finishing complete, ash pan damper lift handle.

Forge.

Per first handle:

1–As per sketch No. 1..... .....

2–As per sketch No. 2..... .....

3–As per sketch No. 3..... .....

4–As per sketch No. 4..... .....

5–As per sketch No. 5..... .....

6–As per sketch No. 6..... .....

7–As per sketch No. 7..... .....

Per handle after first one:

11–As per sketch No. 1..... .....

12–As per sketch No. 2..... .....

13–As per sketch No. 3..... .....

14–As per sketch No. 4..... .....

15–As per sketch No. 5..... .....

16–As per sketch No. 6..... .....

17–As per sketch No. 7..... .....

4S38-18 Straightened. **Rate**.....

Includes straightening old ash pan damper lift handle when same has become bent.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....

2–As per sketch No. 2..... .....

3–As per sketch No. 3..... .....

4–As per sketch No. 4..... .....

5–As per sketch No. 5..... .....

6–As per sketch No. 6..... .....

7–As per sketch No. 7..... .....

Per place repaired after first one:

11–As per sketch No. 1..... .....

12–As per sketch No. 2..... .....

13–As per sketch No. 3..... .....

14–As per sketch No. 4..... .....

15–As per sketch No. 5..... .....

16–As per sketch No. 6..... .....

17–As per sketch No. 7..... .....

ASH PAN

Damper Lift Handle

Damper

HANDLE, LIFT

4S38–21 Welded—break. **Rate**.....

Includes doing necessary scarfing, welding break in ash pan damper lift handle, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S38–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan damper lift handle, dressing and finishing over weld complete.

Forge.

Per first hole:

7–In jaw end..... .....
8–In straight end..... .....

Per hole after first one:

11–In jaw end..... .....
12–In straight end..... .....

4S38–21 Welded—new jaw end—making included. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing complete, jaw end for ash pan damper lift handle, welding jaw on body of handle, dressing and finishing to shape complete.

Forge.

Per first jaw end:

17–As per sketch No. 2..... .....
18–As per sketch No. 3..... .....
19–As per sketch No. 6..... .....

Per jaw end after first one:

22–As per sketch No. 2..... .....
23–As per sketch No. 3..... .....
24–As per sketch No. 6..... .....

4S38–21 Welded—new straight end—making included. **Rate**.....

Includes getting material, dressing, bending and finishing ash pan damper lift handle straight end, and welding end on body of handle complete.

Forge:

31–Per first straight end..... .....
32–Per straight end after first one..... .....

ASH PAN

Damper Lift Handle

Damper

HOOK, BACK



4S46–13 Made. Rate.....

Includes getting material, bending, dressing and finishing ash pan damper back hook complete.

Forge:

1–Per first hook..... .....

2–Per hook after first one..... .....

4S46–18 Straightened. Rate.....

Includes straightening old ash pan damper back hook when same has become bent.

Forge:

1–Per first hook..... .....

2–Per hook after first one..... .....

4S46–21 Welded (holes plugged). Rate.....

Includes making plug, welding same in hole in ash pan damper back hook, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....

2–Per hole after first one..... .....

ASH PAN

Damper, Back Hook

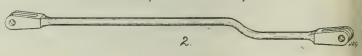
Damper

ROD, CONNECTING

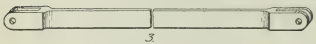
Ash Pan Damper Connecting Rod

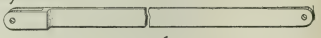


Ash Pan Damper Connecting Rod



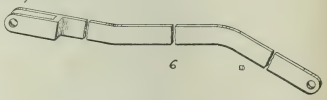
Ash Pan Damper Connecting Rods





Ash Pan Damper Connecting Rods





Ash Pan Damper Connecting Rods





4S60–2 Bend changed. **Rate**.....

Includes changing bend in ash pan damper connecting rod.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....
7–As per sketch No. 7..... .....

Per bend changed after first one:

11–As per sketch No. 1..... .....
12–As per sketch No. 2..... .....
13–As per sketch No. 3..... .....
14–As per sketch No. 4..... .....
15–As per sketch No. 5..... .....
16–As per sketch No. 6..... .....
17–As per sketch No. 7..... .....

ASH PAN

Damper Connecting Rod

Damper

ROD, CONNECTING

4S60-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening ash pan damper connecting rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....
8–As per sketch No. 8.....

Per rod after first one:

11–As per sketch No. 1.....
12–As per sketch No. 2.....
13–As per sketch No. 3.....
14–As per sketch No. 4.....
15–As per sketch No. 5.....
16–As per sketch No. 6.....
17–As per sketch No. 7.....
18–As per sketch No. 8.....

4S60-12 Lengthened or shortened—by welding. **Rate**.....

Includes cutting ash pan damper connecting rod, taking out required stock to shorten or welding in necessary stock to lengthen, dressing and finishing to new length complete.

Forge.

Per first rod:

23–As per sketch No. 1.....
24–As per sketch No. 2.....
25–As per sketch No. 3.....
26–As per sketch No. 4.....
27–As per sketch No. 5.....
28–As per sketch No. 6.....
29–As per sketch No. 7.....

Per rod after first one:

34–As per sketch No. 1.....
35–As per sketch No. 2.....
36–As per sketch No. 3.....
37–As per sketch No. 4.....
38–As per sketch No. 5.....
39–As per sketch No. 6.....
40–As per sketch No. 7.....

Damper

ROD, CONNECTING

4S60–13 Made complete. **Rate**.....

Includes getting material, forging, doing necessary welding, bending, dressing and finishing complete, ash pan damper connecting rod.

Forge.

Per first rod:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....
8–As per sketch No. 8.....

Per rod after first one:

13–As per sketch No. 1.....
14–As per sketch No. 2.....
15–As per sketch No. 3.....
16–As per sketch No. 4.....
17–As per sketch No. 5.....
18–As per sketch No. 6.....
19–As per sketch No. 7.....
20–As per sketch No. 8.....

4S60–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in ash pan damper connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....
8–As per sketch No. 8.....

Per place repaired after first one:

13–As per sketch No. 1.....
14–As per sketch No. 2.....
15–As per sketch No. 3.....
16–As per sketch No. 4.....
17–As per sketch No. 5.....
18–As per sketch No. 6.....
19–As per sketch No. 7.....
20–As per sketch No. 8.....

ASH PAN

Damper Connecting Rod

Damper

ROD, CONNECTING

4S60–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan damper connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

25–As per sketch No. 1.....
26–As per sketch No. 2.....
27–As per sketch No. 3.....
28–As per sketch No. 4.....
29–As per sketch No. 5.....
30–As per sketch No. 6.....
31–As per sketch No. 7.....
32–As per sketch No. 8.....

Per place repaired after first one:

37–As per sketch No. 1.....
38–As per sketch No. 2.....
39–As per sketch No. 3.....
40–As per sketch No. 4.....
41–As per sketch No. 5.....
42–As per sketch No. 6.....
43–As per sketch No. 7.....
44–As per sketch No. 8.....

4S60–21 Welded (straight end) (making included). **Rate**.....

Includes getting material, bending, dressing and finishing straight end of ash pan damper connecting rod, welding end on body of rod, dressing and finishing complete.

Forge.

Per first end:

49–As per sketch No. 4.....
50–As per sketch No. 5.....
51–As per sketch No. 8.....

Per end after first one:

56–As per sketch No. 4.....
57–As per sketch No. 5.....
58–As per sketch No. 8.....

Damper

ROD, CONNECTING

4S60–21 Welded (jaw end) (making included.) **Rate**.....

Includes getting material, forging, cutting jaw, dressing and finishing jaw end of ash pan damper connecting rod, welding jaw on body of rod, dressing and finishing complete.

Forge.

Per first jaw end:

61–As per sketch No. 1 .....
62–As per sketch No. 2 .....
63–As per sketch No. 3 .....
64–As per sketch No. 4 .....
65–As per sketch No. 5 .....
66–As per sketch No. 6 .....
67–As per sketch No. 7 .....

Per jaw end after first one:

71–As per sketch No. 1 .....
72–As per sketch No. 2 .....
73–As per sketch No. 3 .....
74–As per sketch No. 4 .....
75–As per sketch No. 5 .....
76–As per sketch No. 6 .....
77–As per sketch No. 7 .....

4S60–21 Welded (holes plugged) (in jaw end). **Rate**.....

Includes making plug, welding same in hole in jaw end of ash pan damper connecting rod, dressing and finishing over weld complete.

Forge.

Per first hole:

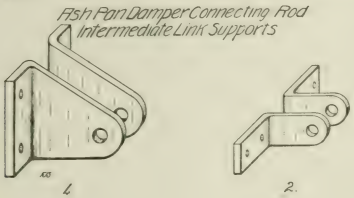
81–As per sketch No. 1 .....
82–As per sketch No. 2 .....
83–As per sketch No. 3 .....
84–As per sketch No. 4 .....
85–As per sketch No. 5 .....
86–As per sketch No. 6 .....
87–As per sketch No. 7 .....

Per hole after first one:

91–As per sketch No. 1 .....
92–As per sketch No. 2 .....
93–As per sketch No. 3 .....
94–As per sketch No. 4 .....
95–As per sketch No. 5 .....
96–As per sketch No. 6 .....
97–As per sketch No. 7 .....

Damper

ROD, CONNECTING—LINK, INTERMEDIATE—SUPPORT



4S66–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing ash pan damper connecting rod intermediate link support to shape complete.

Forge.

Per first half of support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per half of support after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....

4S66–18 Straightened. **Rate**.....

Includes straightening old ash pan damper connecting rod intermediate link support when same has become bent.

Forge.

Per first half of support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per half of support after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....

4S66–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan damper connecting rod intermediate link support, dressing and finishing over weld complete.

Forge.

Per first hole:

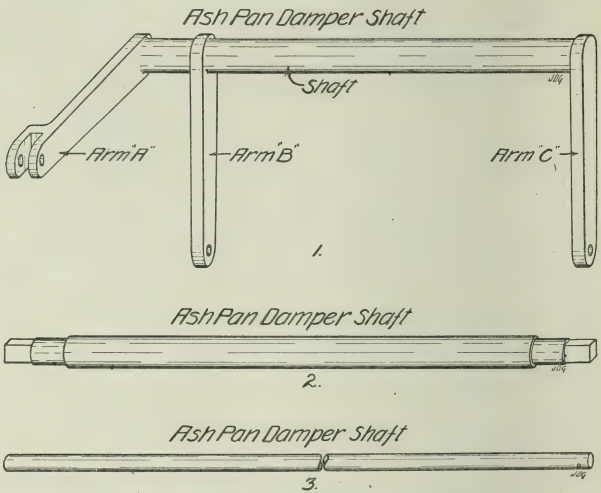
1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hole after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....

Damper

SHAFT



4S70–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for ash pan damper shaft.

Power shears.

Per piece cut:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

4S70–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening ash pan damper shaft by drawing out or upsetting same.

Forge.

Per first shaft:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

ASH PAN

Damper Shaft

Damper
SHAFT

Per shaft after first one:
8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....

4S70–13 Made. **Rate** .....

Includes getting material, forging all arms and body, welding arms on body, dressing, squaring and finishing ash pan damper shaft complete.

Forge.
Per first shaft:
1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
Per shaft after first one:
7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4S70–18 Straightened. **Rate** .....

Includes straightening old ash pan damper shaft when same has become bent.

Forge.
Per first shaft:
1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
Per shaft after first one:
7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4S70–21 Welded (break). **Rate** .....

Includes doing necessary scarfing, welding break in ash pan damper shaft, dressing and finishing over weld complete.

Forge.
Per first place repaired in shaft:
1–As per sketch No. 1 .....
Per place repaired after first one in shaft:
5–As per sketch No. 1 .....

ASH PAN
Damper Shaft

Damper

SHAFT

4S70–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan damper shaft, dressing and finishing over weld complete.

Forge.

Per first place repaired in shaft:

10–As per sketch No. 1..... .....

Per place repaired after first one in shaft:

14–As per sketch No. 1..... .....

4S70–21 Welded (new end). **Rate**.....

Includes getting material and welding new end on ash pan damper shaft, dressing and squaring up end complete.

Forge.

Per first end:

19–As per sketch No. 2..... .....

Per end after first one:

24–As per sketch No. 2..... .....

ASH PAN

Damper Shaft

Damper

SHAFT, ARM

4S72-12 Lengthened or shortened. Rate.....

Includes lengthening or shortening ash pan damper shaft arm by drawing out or upsetting same.

Forge:

1–Per first arm.....

2–Per arm after first one.....

4S72-13 Made and welded on shaft. Rate.....

Includes getting material, blocking out, forging, cutting jaw if necessary, dressing and finishing ash pan damper shaft arm, doing necessary scarfing, welding arm on shaft, squaring arm and finishing complete.

Forge.

Per first arm:

1–Arm A.....

2–Arm B.....

3–Arm C.....

Per arm after first one:

7–Arm A.....

8–Arm B.....

9–Arm C.....

4S72-21 Welded (break). Rate.....

Includes doing necessary scarfing, welding break in ash pan damper shaft arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired.....

2–Per place repaired after first one.....

4S72-21 Welded (holes plugged). Rate.....

Includes making plug, welding same in hole in ash pan damper shaft arm, dressing and finishing over weld complete.

Forge.

Per first hole:

7–In jaw of arm A.....

8–In end of arm B.....

9–In end of arm C.....

Per hole after first one:

14–In jaw of arm A.....

15–In end of arm B.....

16–In end of arm C.....

Damper

SHAFT, VERTICAL—ARM, LOOSE



4S76–2 Bend changed. **Rate**.....

Includes changing bend in ash pan damper vertical shaft loose arm.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S76–6 Dressed, bent and finished. **Rate**.....

Includes dressing, bending and finishing ash pan damper vertical shaft loose arm complete, after same has been forged.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S76–9 Forged. **Rate**.....

Includes getting material, blocking out and forging ash pan damper vertical shaft loose arm complete, ready for dressing.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S76–13 Made complete at forge. **Rate**.....

Includes getting material, blocking out and forging ash pan damper vertical shaft loose arm, bending, dressing and finishing complete.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

ASH PAN

Damper Vertical Shaft Loose Arm

Damper

SHAFT, VERTICAL—ARM, LOOSE

4S76–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan damper vertical shaft loose arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S76–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan damper vertical shaft loose arm, dressing and finishing over weld complete.

Forge.

Per first hole:

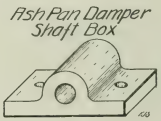
7–In boss end..... .....
8–In small end..... .....

Per hole after first one:

13–In boss end..... .....
14–In small end..... .....

Damper

SHAFT BOX



4S80–13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing ash pan damper shaft box.

Forge:

1–Per first box..... .....

2–Per box after first one..... .....

4S80–18 Straightened. **Rate**.....

Includes straightening old ash pan damper shaft box when same has become bent.

Forge:

1–Per first box..... .....

2–Per box after first one..... .....

4S80–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan damper shaft box, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....

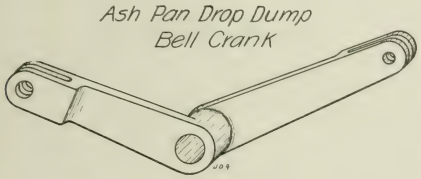
2–Per hole after first one..... .....

ASH PAN

Damper Shaft Box

Dump, Drop

CRANK, BELL



4S100–2 Bend changed. **Rate**.....

Includes changing bend in drop dump ash pan bell crank.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S100–6 Dressed and finished complete. **Rate**.....

Includes cutting jaws, dressing and finishing complete, drop dump ash pan bell crank after same has been forged.

Forge:

1–Per first bell crank..... .....
2–Per bell crank after first one..... .....

4S100–9 Forged. **Rate**.....

Includes getting material, blocking out and forging drop dump bell crank complete, ready for dressing.

Steam hammer:

1–Per first bell crank..... .....
2–Per bell crank after first one..... .....

Forge:

3–Per first bell crank..... .....
4–Per bell crank after first one..... .....

4S100–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening arms of drop dump ash pan bell crank.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

Dump, Drop
CRANK, BELL

4S100–18 Straightened. **Rate**.....

Includes straightening old drop dump bell crank when same has become bent or twisted.

Forge:
1–Per first bell crank..... .....
2–Per bell crank after first one..... .....

4S100–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drop dump bell crank, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S100–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in drop dump bell crank dressing and finishing over weld complete.

Forge:
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S100–21 Welded (holes plugged) (in jaw end). **Rate**.....

Includes making plug, welding same in hole in drop dump bell crank, dressing and finishing over weld complete.

Forge:
9–Per first hole..... .....
10–Per hole after first one..... .....

4S100–21 Welded (new arm) (including making). **Rate**.....

Includes getting material, forging, cutting jaw and dressing new arm for drop dump ash pan bell crank, doing necessary welding, welding arm in place on crank, dressing and finishing arm complete.

Forge:
13–Per first arm..... .....
14–Per arm after first one..... .....

4S100–21 Welded (new arm) (dressed and welded only). **Rate**.....

Includes getting new arm for drop dump bell crank after same has been forged, cutting jaw and dressing arm, doing necessary scarfing, welding arm in place on bell crank, dressing and finishing arm complete.

Forge:
16–Per first arm..... .....
17–Per arm after first one..... .....

ASH PAN
Dump, Drop—Bell Crank

Dump, Drop

CRANK, BELL—ARM

4S102–9 Forged. **Rate**.....

Includes getting material, blocking out and forging drop dump ash pan bell crank arm complete.

Steam hammer:

1–Per first arm..... .....

2–Per arm after first one..... .....

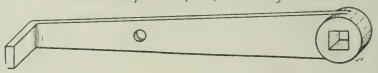
Forge:

3–Per first arm..... .....

4–Per arm after first one..... .....

Dump, Drop
CRANK, OPERATING

Ash Pan Drop Dump Operating Crank



4S108–2 Bend changed. **Rate**.....

Includes changing bend in drop dump ash pan operating crank.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S108–3 Closed (holes). **Rate**.....

Includes closing hole in boss end of drop dump ash pan operating crank.

Forge:

1–Per first hole closed..... .....
2–Per hole closed after first one..... .....

4S108–6 Dressed. **Rate**.....

Includes dressing and finishing complete, drop dump ash pan operating crank after same has been forged.

Forge:

1–Per first crank..... .....
2–Per crank after first one..... .....

4S108–9 Forged. **Rate**.....

Includes getting material, blocking out, forging drop dump ash pan operating crank complete, ready for dressing.

Steam hammer:

1–Per first crank..... .....
2–Per crank after first one..... .....

Forge:

3–Per first crank..... .....
4–Per crank after first one..... .....

ASH PAN
Dump, Drop—Operating Crank

Dump, Drop
CRANK, OPERATING

4S108–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing, bending and finishing complete, drop dump ash pan operating crank.

Steam hammer:
8–Per first crank..... .....
9–Per crank after first one..... .....

Forge:
12–Per first crank..... .....
13–Per crank after first one..... .....

4S108–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening drop dump ash pan operating crank by drawing out or upsetting same.

Forge:
1–Per first crank..... .....
2–Per crank after first one..... .....

4S108–18 Straightened. **Rate**.....

Includes straightening old drop dump operating crank when same has become bent or twisted.

Forge:
1–Per first crank..... .....
2–Per crank after first one..... .....

4S108–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drop dump operating crank, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S108–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in drop dump operating crank, dressing and finishing over weld complete.

Forge:
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

Dump, Drop

CRANK, OPERATING

4S108–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in drop dump operating crank, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

4S108–21 Welded (new boss end). **Rate**.....

Includes getting material and forging new boss end for drop dump ash pan operating crank, doing necessary scarfing, welding end on body of crank, dressing and finishing end to shape complete.

Forge:

12–Per first end..... .....
13–Per end after first one..... .....

4S108–21 Welded (new flat end). **Rate**.....

Includes getting necessary material, welding same on flat end of drop dump ash pan operating crank, dressing, bending and finishing end to shape complete.

Forge:

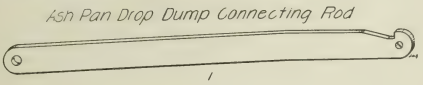
16–Per first end..... .....
17–Per end after first one..... .....

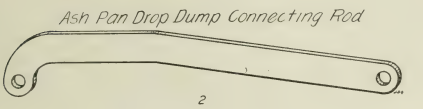
ASH PAN

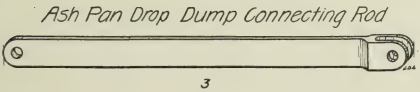
Dump, Drop—Operating Crank

Dump, Drop

ROD, CONNECTING







4S140–2 Bend changed. **Rate**.....

Includes changing bend in drop dump ash pan connecting rod.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bend changed after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

4S140–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening drop dump ash pan connecting rod.

Forge.

Per first rod:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per rod after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

Dump, Drop

ROD, CONNECTING

4S140–13 Made. **Rate**.....

Includes getting material, forging, cutting jaw if necessary, dressing and finishing drop dump ash pan connecting rod complete.

Forge.

Per first rod:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per rod after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

4S140–18 Straightened. **Rate**.....

Includes straightening old drop dump connecting rod when same has become bent or twisted.

Forge.

Per first rod:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per rod after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

4S140–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drop dump connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

ASH PAN

Dump, Drop—Connecting Rod

Dump, Drop
ROD, CONNECTING

4S140–21 Welded (crack). Rate.....

Includes making dutchman, welding same in crack in drop dump connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per place repaired after first one:

16–As per sketch No. 1 .....
17–As per sketch No. 2 .....
18–As per sketch No. 3 .....

4S140–21 Welded (new jaw end). Rate.....

Includes getting material and forging out drop dump ash pan connecting rod jaw end, dressing jaw, welding same on end of connecting rod, and finishing end complete.

Forge.

Per first end:

23–As per sketch No. 3 .....

Per end after first one:

25–As per sketch No. 3 .....

4S140–21 Welded (new flat end). Rate.....

Includes getting material for flat end, welding same on end of drop dump ash pan connecting rod, dressing and finishing end to shape complete.

Forge.

Per first end:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3 .....

Per end after first one:

36–As per sketch No. 1 .....
37–As per sketch No. 2 .....
38–As per sketch No. 3 .....

Dump, Drop

ROD, CONNECTING

4S140–21 Welded (new bent end). **Rate**.....

Includes getting material for bent end, welding same on end of drop dump ash pan connecting rod, bending, dressing and finishing end to shape complete.

Forge.

Per first end:

46–As per sketch No. 2..... .....

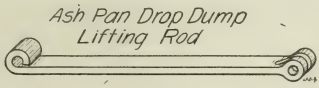
Per end after first one:

50–As per sketch No. 2..... .....

ASH PAN

Dump, Drop—Connecting Rod

Dump, Drop
ROD, LIFTING



4S146–2 Bend changed. Rate.....

Includes changing bend in drop dump ash pan lifting rod.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S146–6 Dressed. Rate.....

Includes dressing and finishing drop dump ash pan lifting rod complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S146–9 Forged (in one piece). Rate.....

Includes getting material and forging drop dump ash pan lifting rod in one piece complete, ready for dressing.

Steam hammer:

1–Per first rod..... .....
2–Per rod after first one..... .....

Forge:

3–Per first rod..... .....
4–Per rod after first one..... .....

4S146–9 Forged and dressed. Rate.....

Includes getting material, blocking out, forging, dressing and finishing drop dump ash pan lifting rod complete.

Forge:

5–Per first rod..... .....
6–Per rod after first one..... .....

4S146–12 Lengthened or shortened. Rate.....

Includes lengthening or shortening drop dump ash pan lifting rod.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

Dump, Drop
ROD, LIFTING

4S146–18 Straightened. **Rate**.....

Includes straightening old drop dump lifting rod when same has become bent or twisted.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S146–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drop dump lifting rod, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S146–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in drop drum lifting rod, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S146–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in drop dump lifting rod, dressing and finishing over weld complete.

Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

4S146–21 Welded (new boss end) (after same has been forged). **Rate**.....

Includes getting new boss end after same has been forged, doing necessary scarfing, welding same on body of drop dump ash pan lifting rod.

Forge:

15–Per first end..... .....
16–Per end after first one..... .....

ASH PAN
Dump, Drop—Lifting Rod

Dump, Drop

ROD, LIFTING—END, BOSS

4S150–9 Forged. **Rate**.....

Includes getting material, blocking out and forging boss end of drop dump ash pan lifting rod.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

3–Per first end..... .....
4–Per end after first one..... .....

4S150–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, boss end of drop dump ash pan lifting rod.

Forge:

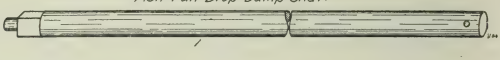
8–Per first end..... .....
9–Per end after first one..... .....

ASH PAN

Dump, Drop—Lifting Rod Boss End

Dump, Drop
SHAFT

Ash Pan Drop Dump Shaft



4S156–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing complete, ash pan drop dump shaft.

Forge:

1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S156–18 Straightened. **Rate**.....

Includes straightening old ash pan drop dump shaft when same has become bent.

Forge:

1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S156–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in ash pan drop dump shaft, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S156–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan drop dump shaft, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S156–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan drop dump shaft, dressing and finishing over weld complete.

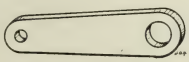
Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

ASH PAN
Dump, Drop—Shaft

Dump, Drop
SHAFT ARM

Ash Pan Drop Dump Shaft Arm



4S160–6 Dressed. **Rate**.....

Includes dressing and finishing complete, drop dump ash pan shaft arm.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S160–9 Forged. **Rate**.....

Includes getting material, blocking out and forging drop dump ash pan shaft arm complete.

Steam hammer:

1–Per first arm..... .....
2–Per arm after first one..... .....

Forge:

3–Per first arm..... .....
4–Per arm after first one..... .....

4S160–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing drop dump ash pan shaft arm complete.

Forge:

8–Per first arm..... .....
9–Per arm after first one..... .....

4S160–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening drop dump ash pan shaft arm by drawing out or upsetting same.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

Dump, Drop

SHAFT ARM

4S160–13 Made (from bar iron). **Rate**.....

Includes getting bar iron, forging, dressing and finishing same to form drop dump ash pan shaft arm complete.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S160–18 Straightened. **Rate**.....

Includes straightening old drop dump ash pan shaft arm when same has become bent.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S160–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drop dump ash pan shaft arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S160–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in drop dump ash pan shaft arm, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S160–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in drop dump ash pan shaft arm, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

ASH PAN

Dump, Drop—Shaft Arm

Dump, Drop
SHAFT BOX

Ash Pan Drop Dump Shaft Box



4S164–6 Dressed. **Rate**.....

Includes dressing and finishing complete, drop dump ash pan shaft box after same has been forged.

Forge:

1–Per first box..... .....
2–Per box after first one..... .....

4S164–9 Forged. **Rate**.....

Includes getting material, blocking out, and forging drop dump ash pan shaft box complete, ready for dressing.

Steam hammer:

1–Per first box..... .....
2–Per box after first one..... .....

Forge:

3–Per first box..... .....
4–Per box after first one..... .....

4S164–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, drop dump ash pan shaft box.

Forge:

7–Per first box..... .....
8–Per box after first one..... .....

4S164–18 Straightened. **Rate**.....

Includes straightening old drop dump ash pan shaft box when same has become bent.

Forge:

1–Per first box..... .....
2–Per box after first one..... .....

Dump, Drop

SHAFT BOX

4S164–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in drop dump ash pan shaft box, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S164–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in drop dump ash pan shaft box, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S164–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in drop dump ash pan shaft box, dressing and finishing over weld complete.

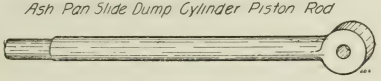
Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

ASH PAN

Dump, Drop—Shaft Box

Dump, Slide
CYLINDER—ROD, PISTON



4S180–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, slide dump ash pan cylinder piston rod.

Steam hammer:
1–Per first rod..... .....
2–Per rod after first one..... .....

Forge:
3–Per first rod..... .....
4–Per rod after first one..... .....

4S180–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing slide dump ash pan cylinder piston rod complete.

Forge:
7–Per first rod..... .....
8–Per rod after first one..... .....

4S180–18 Straightened. **Rate**.....

Includes straightening old slide dump ash pan cylinder piston rod when same has become bent.

Forge:
1–Per first rod..... .....
2–Per rod after first one..... .....

4S180–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in slide dump ash pan cylinder piston rod, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S180–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in slide dump ash pan cylinder piston rod, dressing and finishing over weld complete.

Forge:
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

Dump, Slide

CYLINDER—ROD, PISTON

4S180-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in slide dump ash pan cylinder piston rod, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

4S180-21 Welded (new boss end). **Rate**.....

Includes getting necessary material, welding same on slide dump ash pan cylinder piston rod, dressing and finishing end to shape complete.

Forge:

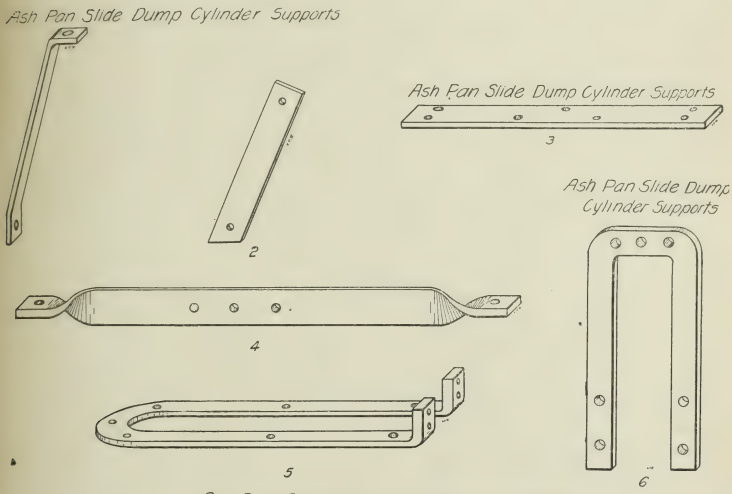
13–Per first end..... .....
14–Per end after first one..... .....

ASH PAN

Dump, Slide—Cylinder Piston Rod

Dump, Slide

CYLINDER SUPPORT



ASH PAN

Dump, Slide—Cylinder Support

Dump, Slide

CYLINDER SUPPORT

4S186–2 Bend changed. **Rate**.....

Includes changing bend in ash pan slide dump cylinder support.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 3 .....
3–As per sketch No. 4 .....
4–As per sketch No. 5 .....
5–As per sketch No. 6 .....
6–As per sketch No. 7 .....
7–As per sketch No. 8 .....
8–As per sketch No. 9 .....
9–As per sketch No. 10 .....

Per bend changed after first one:

12–As per sketch No. 1 .....
13–As per sketch No. 3 .....
14–As per sketch No. 4 .....
15–As per sketch No. 5 .....
16–As per sketch No. 6 .....
17–As per sketch No. 7 .....
18–As per sketch No. 8 .....
19–As per sketch No. 9 .....
20–As per sketch No. 10 .....

4S186–4 Cut—Iron. **Rate**.....

Includes cutting iron at forge or power shears for ash pan slide dump cylinder support, and grinding ends of same at emery wheel when cut at power shears.

Power shears and emery wheel.

Per piece cut:

1–As per sketch No. 2 .....
2–As per sketch No. 11 .....

Forge.

Per first piece cut:

5–As per sketch No. 11 .....

Per piece cut after first one:

7–As per sketch No. 11 .....

ASH PAN

Dump, Slide—Cylinder Support

Dump, Slide
CYLINDER SUPPORT

4S186–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening ash pan slide dump cylinder support by drawing out or upsetting same.

Forge.

Per first support:

1–As per sketch No. 3.....
2–As per sketch No. 4.....
3–As per sketch No. 5, per side.....
4–As per sketch No. 6, per side.....
5–As per sketch No. 7.....
6–As per sketch No. 8.....

Per support after first one:

9–As per sketch No. 3.....
10–As per sketch No. 4.....
11–As per sketch No. 5, per side.....
12–As per sketch No. 6, per side.....
13–As per sketch No. 7.....
14–As per sketch No. 8.....

4S186–13 Made (from bar iron). **Rate**.....

Includes getting bar iron, bending, dressing and finishing ash pan slide dump cylinder support complete.

Forge.

Per first support:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....
8–As per sketch No. 8.....
9–As per sketch No. 9.....
10–As per sketch No. 10.....

Per support after first one:

15–As per sketch No. 1.....
16–As per sketch No. 2.....
17–As per sketch No. 3.....
18–As per sketch No. 4.....
19–As per sketch No. 5.....
20–As per sketch No. 6.....
21–As per sketch No. 7.....
22–As per sketch No. 8.....
23–As per sketch No. 9.....
24–As per sketch No. 10.....

Dump, Slide
CYLINDER SUPPORT

4S186–18 Straightened. **Rate**.....

Includes straightening old ash pan slide dump cylinder support when same has become bent.

Forge.

Per first support:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....
4–As per sketch No. 4 ....
5–As per sketch No. 5 ....
6–As per sketch No. 6 ....
7–As per sketch No. 7 ....
8–As per sketch No. 8 ....
9–As per sketch No. 9 ....
10–As per sketch No. 10 ....
11–As per sketch No. 11 ....

Per support after first one:

15–As per sketch No. 1 ....
16–As per sketch No. 2 ....
17–As per sketch No. 3 ....
18–As per sketch No. 4 ....
19–As per sketch No. 5 ....
20–As per sketch No. 6 ....
21–As per sketch No. 7 ....
22–As per sketch No. 8 ....
23–As per sketch No. 9 ....
24–As per sketch No. 10 ....
25–As per sketch No. 11 ....

4S186–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in ash pan slide dump cylinder support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....
4–As per sketch No. 4 ....
5–As per sketch No. 5 ....
6–As per sketch No. 6 ....
7–As per sketch No. 7 ....
8–As per sketch No. 8 ....
9–As per sketch No. 9 ....
10–As per sketch No. 10 ....

Dump, Slide

CYLINDER SUPPORT

Per place repaired after first one:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....
18–As per sketch No. 4 .....
19–As per sketch No. 5 .....
20–As per sketch No. 6 .....
21–As per sketch No. 7 .....
22–As per sketch No. 8 .....
23–As per sketch No. 9 .....
24–As per sketch No. 10 .....

4S186–21 Welded (crack). Rate.....

Includes making dutchman, welding same in crack in ash pan slide dump cylinder support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3 .....
33–As per sketch No. 4 .....
34–As per sketch No. 5 .....
35–As per sketch No. 6 .....
36–As per sketch No. 7 .....
37–As per sketch No. 8 .....
38–As per sketch No. 9 .....
39–As per sketch No. 10 .....

Per place repaired after first one:

45–As per sketch No. 1 .....
46–As per sketch No. 2 .....
47–As per sketch No. 3 .....
48–As per sketch No. 4 .....
49–As per sketch No. 5 .....
50–As per sketch No. 6 .....
51–As per sketch No. 7 .....
52–As per sketch No. 8 .....
53–As per sketch No. 9 .....
54–As per sketch No. 10 .....

Dump, Slide

CYLINDER SUPPORT

4S186-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan slide dump cylinder support, dressing and finishing over weld complete.

Forge.

Per first hole:

60–As per sketch No. 1 .....
61–As per sketch No. 2 .....
62–As per sketch No. 3 .....
63–As per sketch No. 4 .....
64–As per sketch No. 5 .....
65–As per sketch No. 6 .....
66–As per sketch No. 7 .....
67–As per sketch No. 8 .....
68–As per sketch No. 9 .....
69–As per sketch No. 10 .....

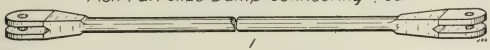
Per hole after first one:

75–As per sketch No. 1 .....
76–As per sketch No. 2 .....
77–As per sketch No. 3 .....
78–As per sketch No. 4 .....
79–As per sketch No. 5 .....
80–As per sketch No. 6 .....
81–As per sketch No. 7 .....
82–As per sketch No. 8 .....
83–As per sketch No. 9 .....
84–As per sketch No. 10 .....

Dump, Slide

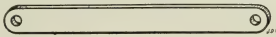
ROD, CONNECTING

Ash Pan Slide Dump Connecting Rod



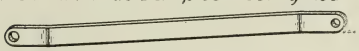
1

Ash Pan Slide Dump Connecting Rod



2

Ash Pan Slide Dump Connecting Rod



3

4S190–2 Bend changed. **Rate**.....

Includes changing bend in slide dump ash pan connecting rod.

Forge.

Per first bend changed:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....

Per bend changed after first one:

7–As per sketch No. 1 ....
8–As per sketch No. 2 ....
9–As per sketch No. 3 ....

4S190–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening slide dump ash pan connecting rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....

Per rod after first one:

7–As per sketch No. 1 ....
8–As per sketch No. 2 ....
9–As per sketch No. 3 ....

Dump, Slide

ROD, CONNECTING

4S190–13 Made. **Rate**.....

Includes getting material, blocking out and forging jaw, welding same on ends of slide dump connecting rod, or cutting material to length, doing necessary bending, dressing and finishing slide dump ash pan connecting rod complete.

Forge.

Per first rod:

1–As per sketch No.1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per rod after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4S190–18 Straightened. **Rate**.....

Includes straightening old slide dump ash pan connecting rod when same has become bent.

Forge.

Per first rod:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per rod after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4S190–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in slide dump ash pan connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per place repaired after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

ASH PAN

Dump, Slide—Connecting Rod

Dump, Slide

ROD, CONNECTING

4S190–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in slide dump ash pan connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....
14–As per sketch No. 3..... .....

Per place repaired after first one:

18–As per sketch No. 1..... .....
19–As per sketch No. 2..... .....
20–As per sketch No. 3..... .....

4S190–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in slide dump ash pan connecting rod, dressing and finishing over weld complete.

Forge.

Per first hole:

25–As per sketch No. 1..... .....
26–As per sketch No. 2..... .....
27–As per sketch No. 3..... .....

Per hole after first one:

32–As per sketch No. 1..... .....
33–As per sketch No. 2..... .....
34–As per sketch No. 3..... .....

4S190–21 Welded (new flat end). **Rate**.....

Includes getting material, welding necessary stock on flat end of slide dump ash pan connecting rod, dressing and finishing end to shape complete.

Forge.

Per first end:

40–As per sketch No. 2..... .....
41–As per sketch No. 3..... .....

Per end after first one:

45–As per sketch No. 2..... .....
46–As per sketch No. 3..... .....

Dump, Slide

ROD, CONNECTING

4S190–21 Welded (new jaw) (including making). **Rate**.....

Includes getting material, blocking out and forging jaw, welding same on end of slide dump ash pan connecting rod, dressing and finishing end to shape complete.

Forge:

54–Per first end..... .....
55–Per end after first one..... .....

4S190–21 Welded (new jaw) (after same has been made). **Rate**.....

Includes getting jaw after same has been made, doing necessary scarfing, welding jaw on end of slide dump ash pan connecting rod, dressing and finishing complete.

Forge:

60–Per first end..... .....
61–Per end after first one..... .....

Dump, Slide

ROD, CONNECTING—END, JAW

4S194–13 Made. **Rate**.....

Includes getting material, blocking out, forging and dressing jaw end of slide dump ash pan connecting rod complete, ready for welding to rod.

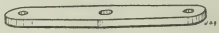
Forge:

1–Per first end..... .....

2–Per end after first one..... .....

Dump, Slide
YOKE

Ash Pan Slide Dump Yoke



4S200–2 Bend changed. **Rate**.....

Includes changing bend in ash pan slide dump yoke to fit rods.

Forge:
1–Per first yoke..... .....
2–Per yoke after first one..... .....

4S200–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening ash pan slide dump yoke by drawing out or upsetting same.

Forge:
1–Per first yoke..... .....
2–Per yoke after first one..... .....

4S200–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, ash pan slide dump yoke.

Forge:
1–Per first yoke..... .....
2–Per yoke after first one..... .....

4S200–18 Straightened. **Rate**.....

Includes straightening old ash pan slide dump yoke when same has become bent or twisted.

Forge:
1–Per first yoke..... .....
2–Per yoke after first one..... .....

4S200–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in ash pan slide dump yoke, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

ASH PAN
Dump, Slide—Yoke

Dump, Slide
YOKE

4S200–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan slide dump yoke, dressing and finishing over weld complete.

Forge:
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S200–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan slide dump yoke, dressing and finishing over weld complete.

Forge:
9–Per first hole..... .....
10–Per hole after first one..... .....

Dump, Slide
YOKE LUG

Ash Pan Slide Dump
Yoke Lug



4S210–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing complete, ash pan slide dump yoke lug.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4S210–18 Straightened. **Rate**.....

Includes straightening old ash pan slide dump yoke lug when same has become bent or twisted.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4S210–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan slide dump yoke lug, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S210–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan slide dump yoke lug, dressing and finishing over weld complete.

Forge:
5–Per first hole..... .....
6–Per hole after first one..... .....

Dump, Slide
YOKE, ROD PULL

Ash Pan Slide Dump Yoke Pull Rod



4S216–4 Cut—Iron, and ground. **Rate**.....

Includes cutting iron for slide dump ash pan yoke pull rod at power shears, and grinding ends of rod at emery wheel.

Power shears and emery wheel:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S216–18 Straightened. **Rate**.....

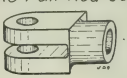
Includes straightening old slide dump ash pan yoke pull rod when same has become bent.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

Dump, Slide

YOKE—ROD, PULL—END, LOOSE JAW



4S220–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing complete, ash pan slide dump yoke pull rod loose jaw end.

Forge:

1–Per first jaw..... .....
2–Per jaw after first one..... .....

4S220–18 Straightened. **Rate**.....

Includes straightening old ash pan slide dump yoke pull rod loose jaw end when same has become bent or twisted.

Forge:

1–Per first jaw..... .....
2–Per jaw after first one..... .....

ASH PAN

Dump, Slide—Yoke Pull Rod—Loose Jaw End

SUPPORT





4S250–2 Bend changed. Rate.....

Includes changing bend in ash pan support.

Forge.

Per first bend changed:

1–As per sketch No. 2..... .....
2–As per sketch No. 3..... .....
3–As per sketch No. 4..... .....

Per bend changed after first one:

7–As per sketch No. 2..... .....
8–As per sketch No. 3..... .....
9–As per sketch No. 4..... .....

4S250–4 Cut—Iron, and ground. Rate.....

Includes cutting iron at power shears and grinding ends of iron at emery wheel for ash pan support.

Power shears and emery wheel.

Per first support:

1–As per sketch No. 1..... .....

Per support after first one:

2–As per sketch No. 1..... .....

SUPPORT

4S250–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing ash pan support complete.

Forge.

Per first support:

1–As per sketch No. 2..... .....
2–As per sketch No. 3..... .....
3–As per sketch No. 4..... .....

Per support after first one:

7–As per sketch No. 2..... .....
8–As per sketch No. 3..... .....
9–As per sketch No. 4..... .....

4S250–18 Straightened. **Rate**.....

Includes straightening old ash pan support when same has become bent or twisted.

Forge.

Per first support:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Per support after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....
10–As per sketch No. 4..... .....

4S250–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in ash pan support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 2..... .....
2–As per sketch No. 4..... .....

Per place repaired after first one:

5–As per sketch No. 2..... .....
6–As per sketch No. 4..... .....

ASH PAN

Support

SUPPORT

4S250–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in ash pan support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

10–As per sketch No. 3..... .....
11–As per sketch No. 4..... .....

Per place repaired after first one:

15–As per sketch No. 3..... .....
16–As per sketch No. 4..... .....

4S250–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in ash pan support, dressing and finishing over weld complete.

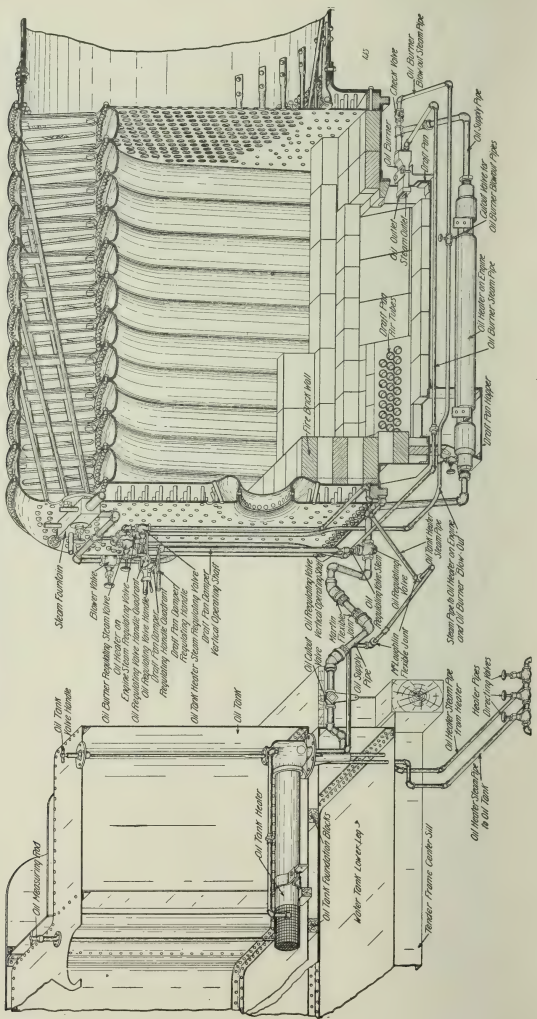
Forge.

Per first hole:

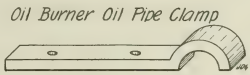
20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....
22–As per sketch No. 3..... .....
23–As per sketch No. 4..... .....

Per hole after first one:

30–As per sketch No. 1..... .....
31–As per sketch No. 2..... .....
32–As per sketch No. 3..... .....
33–As per sketch No. 4..... .....


Oil Measuring Rod
Oil Tank Valve Handle
Oil Tank Heater
Oil Tank Handhole Plate
Water Tank Lower Leg
Heater Frame Center Sill
Oil Heater Steam Pipe to Oil Tank
Oil Heater Drip Valves
Oil Heater Steam Pipe from Heater
Oil Tank
Steam Pipe to Oil Heater on Engine and Oil Burner Elbow Oil
Oil Heater Valve
Oil Heater Valve Handle
Oil Heater Valve Vertical Connection
Oil Heater Valve Handle Connection
Oil Heater Valve Handle
Oil Heater Valve Handle Quadrant
Oil Heater Valve Handle Quadrant Regulating Handle
Oil Heater Valve Handle Regulating Handle
Oil Heater Steam Regulating Valve
Oil Heater Steam Regulating Valve Vertical Opening Shaft
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Burner, Oil
PIPE CLAMP



4S300–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing oil burner pipe clamp complete.

Forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

4S300–18 Straightened. **Rate**.....

Includes straightening old oil burner pipe clamp when same has become bent.

Forge:

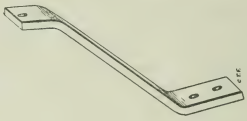
1–Per first clamp..... .....
2–Per clamp after first one..... .....

DRAFT PAN
Burner, Oil—Pipe Clamp

Damper

HANDLE, REGULATING—BRACKET

Draft Pan Damper Regulating Handle Bracket



4S320–2 Bend changed. **Rate**.....

Includes changing bend in draft pan damper regulating handle bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S320–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening draft pan damper regulating handle bracket by drawing out or upsetting same.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S320–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing draft pan damper regulating handle bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S320–18 Straightened. **Rate**.....

Includes straightening old draft pan damper regulating handle bracket when same has become bent.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

DRAFT PAN

Damper Regulating Handle Bracket

Damper

HANDLE, REGULATING—BRACKET

4S320–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in draft pan damper regulating handle bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S320–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper regulating handle bracket, dressing and finishing over weld complete.

Forge:

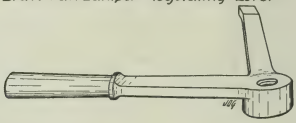
7–Per first hole..... .....
8–Per hole after first one..... .....

DRAFT PAN
Damper Regulating Handle Bracket

Damper

LEVER, REGULATING

Draft Pan Damper Regulating Lever



4S326–13 Made. **Rate**.....

Includes getting material, forging, doing necessary welding, bending, dressing and finishing draft pan damper regulating lever complete.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S326–18 Straightened. **Rate**.....

Includes straightening old draft pan damper regulating lever when same has become bent.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S326–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper regulating lever, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

4S326–21 Welded (new end) (making included). **Rate**.....

Includes getting material, making either end of draft pan damper regulating lever, welding end on lever, dressing and finishing over weld complete.

Forge:

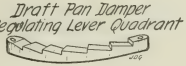
7–Per first end..... .....
8–Per end after first one..... .....

DRAFT PAN

Damper Regulating Lever

Damper

LEVER, REGULATING—QUADRANT



4S330–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, draft pan damper regulating lever quadrant.

Forge:

1–Per first quadrant..... .....
2–Per quadrant after first one..... .....

4S330–18 Straightened. **Rate**.....

Includes straightening old draft pan damper regulating lever quadrant when same has become bent.

Forge:

1–Per first quadrant..... .....
2–Per quadrant after first one..... .....

4S330–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper regulating lever quadrant, dressing and finishing over weld complete.

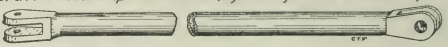
Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

DRAFT PAN
Damper Regulating Lever Quadrant

Damper
ROD, CONNECTING

Draft Pan Damper and Oil Regulating Valve Connecting Rod



4S350–12 Lengthened (by welding). **Rate**.....

Includes cutting draft pan damper connecting rod, doing necessary scarfing, welding in required new stock, dressing and finishing rod to new length complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S350–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening draft pan damper connecting rod by drawing out or upsetting same.

Forge:

7–Per first rod..... .....
8–Per rod after first one..... .....

4S350–13 Made. **Rate**.....

Includes getting material, blocking out, forging and dressing jaw ends, doing necessary welding and finishing complete, draft pan damper connecting rod.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S350–18 Straightened. **Rate**.....

Includes straightening old draft pan damper connecting rod when same has become bent.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S350–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in draft pan damper connecting rod, dressing and finishing over weld complete.

Forge:

1–Per place first repaired..... .....
2–Per place repaired after first one..... .....

DRAFT PAN
Damper, Connecting Rod

Damper

ROD, CONNECTING

4S350–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in draft pan damper connecting rod, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4S350–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper connecting rod, dressing and finishing over weld complete.

Forge:

13–Per first hole in jaw end..... .....
14–Per hole after first one in jaw end..... .....

4S350–21 Welded (new jaw end) (making included). **Rate**.....

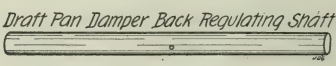
Includes getting material, blocking out new jaw end for draft pan damper connecting rod, welding jaw end on body of old rod, dressing and finishing complete.

Forge:

19–Per first jaw end..... .....
20–Per jaw end after first one..... .....

Damper

SHAFT, BACK REGULATING



4S356–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears or forge for draft pan damper back regulating shaft.

Power shears:

1–Per piece cut..... .....

Forge:

3–Per piece cut..... .....

4S356–18 Straightened. **Rate**.....

Includes straightening old draft pan damper back regulating shaft when same has become bent.

Forge:

1–Per shaft..... .....

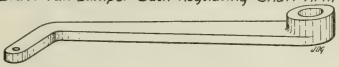
DRAFT PAN

Damper Back, Regulating Shaft

Damper

SHAFT, BACK REGULATING—ARM

Draft Pan Damper Back Regulating Shaft Arm



4S358–13 Made. **Rate**.....

Includes getting material, blocking out, forging, bending, dressing and finishing draft pan damper back regulating shaft arm complete.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S358–18 Straightened. **Rate**.....

Includes straightening old draft pan back regulating shaft arm when same has become bent.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S358–21 Welded (crack.) **Rate**.....

Includes making dutchman, welding same in crack in draft pan back regulating shaft arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S358–21 Welded (holes plugged.) **Rate**.....

Includes making plug, welding same in hole in draft pan back regulating shaft arm, dressing and finishing over weld complete.

Forge.

Per first hole:

7–In boss end..... .....
8–In small end..... .....

Per hole after first one:

13–In boss end..... .....
14–In small end..... .....

4S358–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material, welding same on end on draft pan damper back regulating shaft arm, bending, dressing and finishing arm to shape complete.

Forge:

19–Per first end..... .....
20–Per end after first one..... .....

DRAFT PAN

Damper Back, Regulating Shaft Arm

Damper

SHAFT, VERTICAL

Draft Pan Damper Vertical Operating Shaft



4S366-18 Straightened. **Rate**.....

Includes straightening old draft pan damper vertical shaft when same has become bent.

Forge:

1–Per shaft..... .....

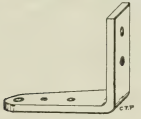
DRAFT PAN

Damper Vertical Shaft

Damper

SHAFT, VERTICAL—BRACKET

Draft Pan Damper and Oil Regulating Valve Vertical Shaft Bracket



4S370–2 Bend changed. **Rate**.....

Includes changing bend in draft pan damper vertical shaft bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S370–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, draft pan damper vertical shaft bracket.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S370–18 Straightened. **Rate**.....

Includes straightening old draft pan damper vertical shaft bracket when same has become bent.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S370–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper vertical shaft bracket, dressing and finishing over weld complete.

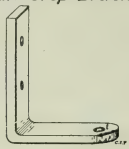
Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Damper

SHAFT, VERTICAL—BRACKET, STEP

Draft Pan Damper and Oil Regulating Valve Vertical Shaft Step Bracket



4S374–2 Bend changed. **Rate**.....

Includes changing bend in draft pan damper vertical shaft step bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S374–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing draft pan damper vertical shaft step bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S374–18 Straightened. **Rate**.....

Includes straightening old draft pan damper vertical shaft step bracket when same has become bent.

Forge:

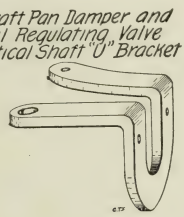
1–Per first bracket..... .....
2–Per bracket after first one..... .....

DRAFT PAN

Damper Vertical Shaft—Step Bracket

Damper

SHAFT, VERTICAL—BRACKET, "U"



4S378–2 Bend changed. **Rate**.....

Includes changing bend in draft pan damper vertical shaft "U" bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S378–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing draft pan damper vertical shaft "U" bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S378–18 Straightened. **Rate**.....

Includes straightening old draft pan damper vertical shaft "U" bracket when same has become bent.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

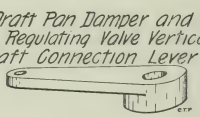
4S378–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper vertical shaft "U" bracket, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Damper
SHAFT, VERTICAL—LEVER, CONNECTION



4S386–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening draft pan damper vertical shaft connection lever by drawing out or upsetting same.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S386–13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing draft pan damper vertical shaft connection lever complete.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S386–18 Straightened. **Rate**.....

Includes straightening old draft pan damper vertical shaft connection lever when same has become bent.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S386–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in draft pan damper vertical shaft connection lever, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S386–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in draft pan damper vertical shaft connection lever, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

DRAFT PAN
Damper Vertical Shaft Connection Lever

Damper

SHAFT, VERTICAL—LEVER, CONNECTION

4S386–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in draft pan damper vertical shaft connection lever, dressing and finishing over weld complete.

Forge.

Per first hole:

13–In boss end..... .....
14–In small end..... .....

Per hole after first one:

18–In boss end..... .....
19–In small end..... .....

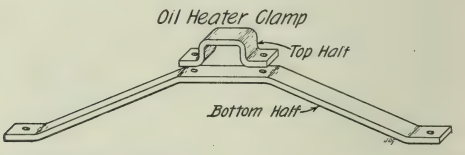
4S386–21 Welded (new end). **Rate**.....

Includes getting material and welding new end on draft pan damper vertical shaft connection lever, dressing and finishing end complete.

Forge:

24–Per first end..... .....
25–Per end after first one..... .....

Heater, Oil
CLAMP



4S400–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening halves of oil heater clamp by drawing out or upsetting same.

Forge:
1–Per first half.....
2–Per half after first one.....

4S400–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing halves of oil heater clamp complete.

Forge.
Per first half:
1–Top half.....
2–Bottom half.....

Per half after first one:
7–Top half.....
8–Bottom half.....

4S400–18 Straightened. **Rate**.....

Includes straightening halves of old oil heater clamp when same has become bent.

Forge.
Per first half:
1–Top half.....
2–Bottom half.....

Per half after first one:
7–Top half.....
8–Bottom half.....

DRAFT PAN
Heater, Oil—Clamp

Heater, Oil
CLAMP

4S400–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in oil heater clamp, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S400–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in oil heater clamp, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

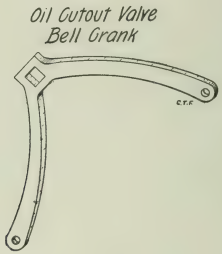
4S400–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in oil heater clamp, dressing and finishing over weld complete.

Forge:

13–Per first hole..... .....
14–Per hole after first one..... .....

Valve, Oil Cut-out
CRANK, BELL



4S450–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening oil cut-out valve bell crank by drawing out or upsetting same.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S450–13 Made. **Rate**.....

Includes getting material, bending, doing necessary welding, dressing and finishing oil cut-out valve bell crank complete.

Forge:

1–Per first crank..... .....
2–Per crank after first one..... .....

4S450–18 Straightened. **Rate**.....

Includes straightening old oil cut-out valve bell crank when same has become bent.

Forge:

1–Per first place straightened..... .....
2–Per place straightened after first one..... .....

4S450–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in oil cut-out valve bell crank, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

DRAFT PAN
Valve, Oil Cut-out—Bell Crank

Valve, Oil Cut-out
CRANK, BELL

4S450–21 Welded (new end) (making included). **Rate**.....

Includes getting material, welding new end on oil cut-out valve bell crank, dressing and finishing to shape complete.

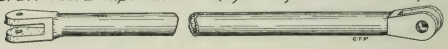
Forge:

7–Per first end..... .....

8–Per end after first one..... .....

Valve, Oil-Regulating
ROD, CONNECTING

Draft Pan Damper and Oil Regulating Valve Connecting Rod



4S460–12 Lengthened (by welding). **Rate**.....

Includes cutting oil-regulating valve connecting rod, doing necessary scarfing, welding in required new stock, dressing and finishing rod to new length complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S460–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening oil-regulating valve connecting rod by drawing out or upsetting same.

Forge:

7–Per first rod..... .....
8–Per rod after first one..... .....

4S460–13 Made. **Rate**.....

Includes getting material, blocking out, forging and dressing jaw ends, doing necessary welding and finishing oil-regulating valve connecting rod complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S460–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve connecting rod when same has become bent.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4S460–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in oil-regulating valve connecting rod, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

DRAFT PAN
Valve, Oil-Regulating—Connecting Rod

Valve, Oil-Regulating
ROD, CONNECTING

4S460–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in oil-regulating valve connecting rod, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4S460–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in oil-regulating valve connecting rod, dressing and finishing over weld complete.

Forge:

13–Per first hole in jaw end..... .....
14–Per hole after first one in jaw end..... .....

4S460–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material, blocking out new jaw end for oil-regulating valve connecting rod, welding jaw end on body of old rod, dressing and finishing complete.

Forge:

19–Per first jaw end..... .....
20–Per jaw end after first one..... .....

Valve, Oil-Regulating
SHAFT, VERTICAL

Oil Regulating Valve Vertical Operating Shaft



4S468–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening oil-regulating valve vertical shaft by drawing out or upsetting same.

Forge:

1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S468–13 Made (from bar iron). **Rate**.....

Includes getting bar iron, squaring up one end and dressing and finishing to form oil-regulating valve vertical shaft complete.

Forge:

1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S468–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve vertical shaft when same has become bent.

Forge:

1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S468–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in oil-regulating valve vertical shaft, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S468–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in oil-regulating valve vertical shaft, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

DRAFT PAN
Valve, Oil-Regulating—Vertical Shaft

Valve, Oil-Regulating
SHAFT, VERTICAL

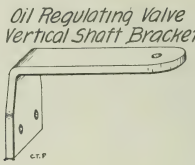
4S468–21 Welded (new end). **Rate**.....

Includes getting necessary material, welding same on body of old oil-regulating valve vertical shaft, dressing and finishing to form new end complete.

Forge:

13–Per first end..... .....
14–Per end after first one..... .....

Valve, Oil-Regulating
SHAFT, VERTICAL—BRACKET



4S472–2 Bend changed. **Rate**.....

Includes changing bend in oil-regulating valve vertical shaft bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S472–13 Made. **Rate**.....

Includes getting material, bending, dressing, and finishing oil-regulating valve vertical shaft bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S472–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve vertical shaft bracket when same has become bent.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S472–21 Welded (holes plugged). **Rate**.....

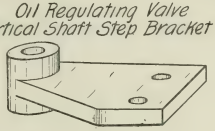
Includes making plug, welding same in hole in oil-regulating valve vertical shaft bracket, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

DRAFT PAN
Valve, Oil-Regulating—Vertical Shaft Bracket

Valve, Oil-Regulating
SHAFT, VERTICAL—BRACKET, STEP



4S476–13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing oil-regulating valve vertical shaft step bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S476–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve vertical shaft step bracket when same has become bent.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S476–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in oil-regulating valve vertical shaft step bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S476–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in oil-regulating valve vertical shaft step bracket, dressing and finishing over weld complete.

Forge.

Per first hole:

7–In boss end..... .....
8–In flat end..... .....

Per hole after first one:

12–In boss end..... .....
13–In flat end..... .....

Valve, Oil-Regulating

SHAFT, VERTICAL—BRACKET, STEP

4S476–21 Welded (new flat end) (making included). **Rate**.....

Includes getting material, welding same on body of oil-regulating valve vertical shaft step bracket to form new flat end, dressing and finishing complete.

Forge:

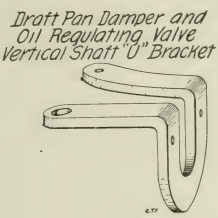
18–Per first end..... .....

19–Per end after first one..... .....

DRAFT PAN

Valve, Oil-Regulating—Vertical Shaft Step—Bracket

Valve, Oil-Regulating
SHAFT, VERTICAL—BRACKET, "U"



4S484–2 Bend changed. **Rate**.....

Includes changing bend in oil-regulating valve vertical shaft "U" bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S484–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing oil-regulating valve vertical shaft "U" bracket.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S484–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve vertical shaft "U" bracket when same has become bent.

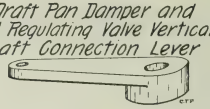
Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

4S484–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in oil-regulating valve vertical shaft "U" bracket, dressing and finishing over weld complete.

Forge:
1–Per first hole..... .....
2–Per hole after first one..... .....

Valve, Oil-Regulating
SHAFT, VERTICAL—LEVER, CONNECTION



4S490–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening oil-regulating valve vertical shaft connection lever by drawing out or upsetting same.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S490–13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing oil-regulating valve vertical shaft connection lever complete.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S490–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve vertical shaft connection lever when same has become bent.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4S490–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in oil-regulating valve vertical shaft connection lever, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S490–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in oil-regulating valve vertical shaft connection lever, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

DRAFT PAN
Valve, Oil-Regulating—Vertical Shaft Connection Lever

Valve, Oil-Regulating

SHAFT, VERTICAL—LEVER, CONNECTION

4S490–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in oil-regulating valve vertical shaft connection lever, dressing and finishing over weld complete.

Forge.

Per first hole:

13–In boss end..... .....
14–In small end..... .....

Per hole after first one:

18–In boss end..... .....
19–In small end..... .....

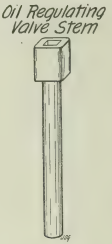
4S490–21 Welded new end. **Rate**.....

Includes getting material and welding new end on oil-regulating valve vertical shaft connection lever, dressing and finishing end complete.

Forge:

24–Per first end..... .....
25–Per end after first one..... .....

Valve, Oil-Regulating
STEM



4S494–6 Dressed. **Rate**.....

Includes squaring up and dressing socket in old oil-regulating valve stem.

Forge:

1–Per first stem..... .....
2–Per stem after first one..... .....

4S494–13 Made complete. **Rate**.....

Includes getting material, forging, dressing and finishing oil-regulating valve stem complete.

Forge:

1–Per first stem..... .....
2–Per stem after first one..... .....

4S494–18 Straightened. **Rate**.....

Includes straightening old oil-regulating valve stem when same has become bent.

Forge:

1–Per first stem..... .....
2–Per stem after first one..... .....

4S494–21 Welded (new end on old stem). **Rate**.....

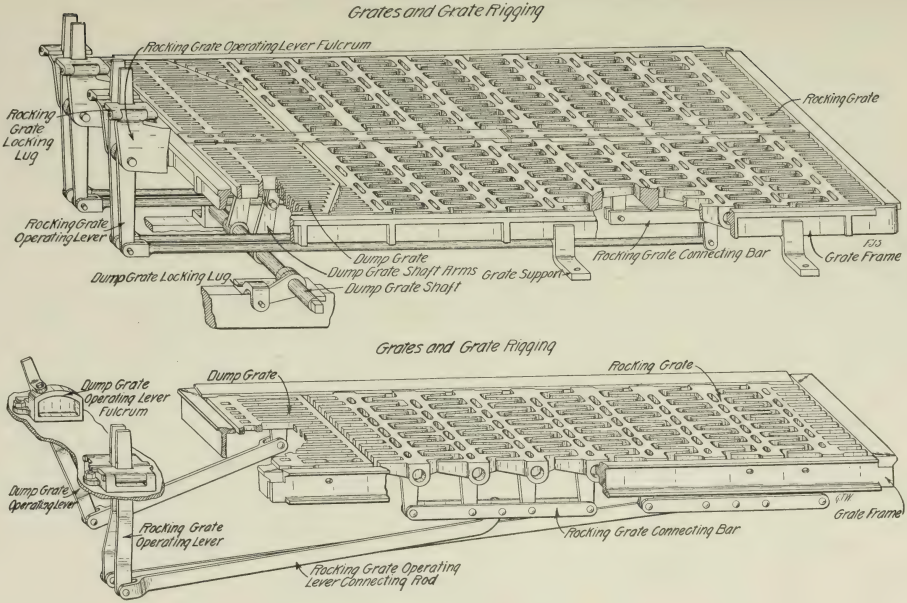
Includes getting material, welding same on end of old oil-regulating valve stem, dressing and finishing stem to shape complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

DRAFT PAN
Valve, Oil-Regulating—Stem

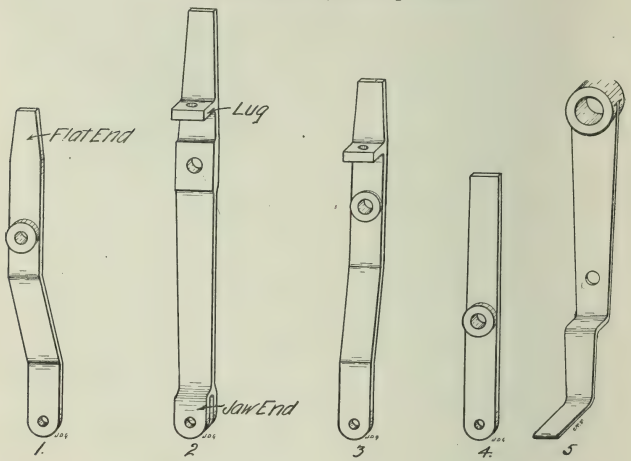
Grates and Grate Rigging—General Arrangement



Grate, Dump

LEVER, OPERATING

Dump Grate Operating Levers



4S500–2 Bend changed. **Rate**.....

Includes changing bend in dump grate operating lever.

Forge.

1–Per first bend changed, all sketches..... .....
8–Per bend changed after first one, all sketches..... .....

4S500–3 Closed—Hole. **Rate**.....

Includes closing hole in boss end of dump grate operating lever.

Forge.

Per first hole closed:

1–As per sketch No. 5..... .....

Per hole closed after first one:

5–As per sketch No. 5..... .....

GRATE RIGGING

Grate, Dump—Operating Lever

Grate, Dump
LEVER, OPERATING

4S500–6 Dressed. **Rate**.....

Includes cutting jaw, bending lip, doing necessary bending, dressing and finishing complete, dump grate operating lever.

Forge.

Per first lever:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....

Per lever after first one:

9–As per sketch No. 1.....
10–As per sketch No. 2.....
11–As per sketch No. 3.....
12–As per sketch No. 4.....
13–As per sketch No. 5.....

4S500–9 Forged. **Rate**.....

Includes getting material, blocking out and forging dump grate operating lever complete, ready for dressing.

Steam hammer.

Per first lever:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....

Per lever after first one:

8–As per sketch No. 1.....
9–As per sketch No. 2.....
10–As per sketch No. 3.....
11–As per sketch No. 4.....
12–As per sketch No. 5.....

Forge.

Per first lever:

17–As per sketch No. 1.....
18–As per sketch No. 2.....
19–As per sketch No. 3.....
20–As per sketch No. 4.....
21–As per sketch No. 5.....

Per lever after first one:

26–As per sketch No. 1.....
27–As per sketch No. 2.....
28–As per sketch No. 3.....
29–As per sketch No. 4.....
30–As per sketch No. 5.....

Grate, Dump
LEVER, OPERATING

4S500–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, bending, dressing and finishing complete, dump grate operating lever.

Forge.

Per first lever:

40–As per sketch No. 1 .....
41–As per sketch No. 2 .....
42–As per sketch No. 3 .....
43–As per sketch No. 4 .....
44–As per sketch No. 5 .....

Per lever after first one:

50–As per sketch No. 1 .....
51–As per sketch No. 2 .....
52–As per sketch No. 3 .....
53–As per sketch No. 4 .....
54–As per sketch No. 5 .....

4S500–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening dump grate operating lever by drawing out or upsetting same.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....

Per lever after first one:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....
12–As per sketch No. 5 .....

4S500–18 Straightened. **Rate**.....

Includes straightening old dump grate operating lever when same has become bent.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....

GRATE RIGGING
Grate, Dump—Operating Lever

Grate, Dump
LEVER, OPERATING

Per lever after first one:
- 8–As per sketch No. 1 .....
- 9–As per sketch No. 2 .....
- 10–As per sketch No. 3 .....
- 11–As per sketch No. 4 .....
- 12–As per sketch No. 5 .....

4S500–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dump grate operating lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:
- 1–As per sketch No. 1 .....
- 2–As per sketch No. 2 .....
- 3–As per sketch No. 3 .....
- 4–As per sketch No. 4 .....
- 5–As per sketch No. 5 .....

Per place repaired after first one:
- 8–As per sketch No. 1 .....
- 9–As per sketch No. 2 .....
- 10–As per sketch No. 3 .....
- 11–As per sketch No. 4 .....
- 12–As per sketch No. 5 .....

4S500–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate operating lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:
- 18–As per sketch No. 1 .....
- 19–As per sketch No. 2 .....
- 20–As per sketch No. 3 .....
- 21–As per sketch No. 4 .....
- 22–As per sketch No. 5 .....

Per place repaired after first one:
- 26–As per sketch No. 1 .....
- 27–As per sketch No. 2 .....
- 28–As per sketch No. 3 .....
- 29–As per sketch No. 4 .....
- 30–As per sketch No. 5 .....

Grate, Dump
LEVER, OPERATING

4S500–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dump grate operating lever, dressing and finishing over weld complete.

Forge.
Per first hole.
In boss end:
35–As per sketch No. 1.....
36–As per sketch No. 2.....
37–As per sketch No. 3.....
38–As per sketch No. 4.....
39–As per sketch No. 5.....

In flat end:
45–As per sketch No. 1.....
46–As per sketch No. 2.....
47–As per sketch No. 3.....
48–As per sketch No. 4.....
49–As per sketch No. 5.....

In jaw end:
52–As per sketch No. 2.....

Per hole after first one.
In boss end:
54–As per sketch No. 1.....
55–As per sketch No. 2.....
56–As per sketch No. 3.....
57–As per sketch No. 4.....
58–As per sketch No. 5.....

In flat end:
62–As per sketch No. 1.....
63–As per sketch No. 2.....
64–As per sketch No. 3.....
65–As per sketch No. 4.....
66–As per sketch No. 5.....

In jaw end:
72–As per sketch No. 2.....

4S500–21 Welded (new lug). **Rate**.....

Includes getting necessary material for lug, welding same on dump grate operating lever, dressing and finishing lug to shape complete.

Forge.
Per first lug:
80–As per sketch No. 2.....
81–As per sketch No. 3.....

Per lug after first one:
87–As per sketch No. 2.....
88–As per sketch No. 3.....

GRATE RIGGING
Great, Dump—Operating Lever

Grate, Dump
LEVER, OPERATING

4S500-21 Welded (new flat end). **Rate**.....

Includes doing necessary scarfing, welding required stock on flat end of dump grate operating lever, dressing and finishing to shape complete.

Forge:
92–Per first end, all sketches..... .....
100–Per end after first one, all sketches..... .....

4S500-21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material, forging, dressing and finishing jaw end, doing necessary scarfing, welding end on body of dump grate operating lever, dressing and finishing end complete.

Forge.
Per first end:
107–As per sketch No. 2..... .....
Per end after first one:
110–As per sketch No. 2..... .....

4S500-21 Welded (new boss end). **Rate**.....

Includes getting material and forging boss end of dump grate operating lever, doing necessary scarfing, welding boss end on body of lever, dressing and finishing over weld complete.

Forge.
Per first end:
115–As per sketch No. 5..... .....
Per end after first one:
118–As per sketch No. 5..... .....

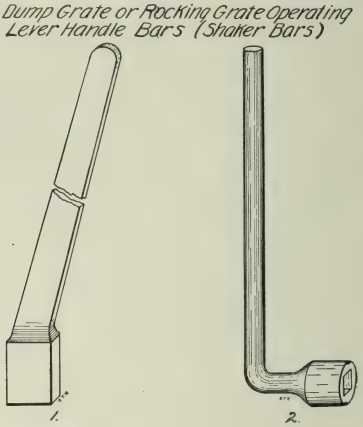
4S500-21 Welded (new bent end). **Rate**.....

Includes getting necessary material, making bends in bent end of dump grate operating lever, welding bent end on body of lever, dressing and finish-end to shape complete.

Forge.
Per first end:
125–As per sketch No. 5..... .....
Per end after first one:
128–As per sketch No. 5..... .....

Grate, Dump

LEVER, OPERATING—BAR, HANDLE



4S506–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending iron for socket end of dump grate operating lever handle bar complete, after iron has been cut and delivered at bulldozer.

Bulldozer.

Per first end:

1–As per sketch No. 1..... .....

Per end after first one:

5–As per sketch No. 1..... .....

4S506–2 Bent (at bulldozer) (after handles have been forged down). **Rate**.....

Includes changing dies in bulldozer and bending box end after same has been welded on handle and handle forged down.

Bulldozer.

Per first bar:

8–As per sketch No. 1..... .....

Per bar after first one:

12–As per sketch No. 1..... .....

GRATE RIGGING

Grate, Dump—Operating Lever, Handle Bar

Grate, Dump
LEVER, OPERATING—BAR, HANDLE

4S506-2 Bend changed. Rate.....

Includes changing bend in dump grate operating lever handle bar.

Forge.

Per first bend changed:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

Per bend changed after first one:

20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....

4S506-3 Closed—Hole. Rate.....

Includes closing hole in boss or socket end of dump grate operating lever handle bar.

Forge.

Per first hole closed:

1–In box end, sketch No. 1..... .....
2–In socket end, sketch No. 2..... .....

Per hole after first one:

6–In box end, sketch No. 1..... .....
7–In socket end, sketch No. 2..... .....

4S506-4 Cut—Iron. Rate.....

Includes cutting iron at power shears for dump grate operating lever handle bar.

Power shears.

Per piece cut:

1–Socket end..... .....
2–Handle end..... .....

4S506-9 Forged (at machine). Rate.....

Includes getting box end of dump grate operating lever handle bar after same has been bent, getting handle after same has been cut, changing dies in forming machine, and forming and welding box on handle complete.

Machine.

Per first bar:

1–As per sketch No. 1..... .....

Per bar after first one:

5–As per sketch No. 1..... .....

Grate, Dump
LEVER, OPERATING—BAR, HANDLE

4S506–9 Forged (forging handles down). **Rate**.....

Includes forging down handles of dump grate operating lever handle bar after box end is welded on at machine.

Steam hammer.

Per first bar:

8–As per sketch No. 1..... .....

Per bar after first one:

12–As per sketch No. 1..... .....

4S506–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, welding, dressing and finishing complete, dump grate operating lever handle bar.

Forge.

Per first bar:

15–As per sketch No. 2..... .....

Per bar after first one:

18–As per sketch No. 2..... .....

4S506–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening dump grate operating lever handle bar by drawing out or upsetting same.

Forge.

Per first bar:

1–As per sketch No. 1..... .....

Per bar after first one:

5–As per sketch No. 1..... .....

4S506–13 Made. **Rate**.....

Includes getting all material, bending, welding and dressing box end, doing necessary scarfing, welding box end on handle of dump grate operating lever handle bar, and dressing bar to shape complete.

Forge.

Per first bar:

1–As per sketch No. 1..... .....

Per bar after first one:

5–As per sketch No. 1..... .....

GRATE RIGGING
Grate, Dump—Operating Lever, Handle Bar

Grate, Dump
LEVER, OPERATING—BAR, HANDLE

4S506-18 Straightened. **Rate**.....

Includes straightening old dump grate operating lever handle bar when same has become bent.

Forge.

Per first bar:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bar after first one..... .....

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

4S506-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dump grate operating lever handle bar, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

4S506-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate operating lever handle bar, dressing and finishing over weld complete.

Forge.

Per first place repaired:

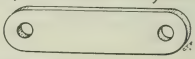
12–As per sketch No. 1..... .....

Per place repaired after first one:

15–As per sketch No. 1..... ....

Grate, Dump
LINK, CONNECTING

Dump Grate Connecting Link



4S510–4 Cut—Iron, and ground. **Rate**.....

Includes cutting iron at power shears for dump grate connecting link, and grinding ends of same at emery wheel.

Power shears and emery wheel:
1–Per link..... .....

4S510–13 Made (from bar iron). **Rate**.....

Includes getting bar iron, dressing ends, and finishing dump grate connecting link complete.

Forge:
1–Per first link..... .....
3–Per link after first one..... .....

4S510–18 Straightened. **Rate**.....

Includes straightening old dump grate connecting link when same has become bent.

Forge:
1–Per first link..... .....
3–Per link after first one..... .....

4S510–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dump grate connecting link, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
5–Per place repaired after first one..... .....

4S510–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate connecting link, dressing and finishing over weld complete.

Forge:
8–Per first place repaired..... .....
11–Per place repaired after first one..... .....

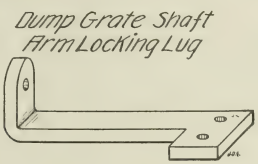
4S510–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dump grate connecting link, dressing and finishing over weld complete.

Forge:
15–Per first hole plugged..... .....
18–Per hole plugged after first one..... .....

GRATE RIGGING
Grate, Dump—Connecting Link

Grate, Dump
LUG, LOCKING



4S514–2 Bend changed. Rate.....

Includes changing bend in dump grate locking lug.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S514–12 Lengthened or shortened. Rate.....

Includes lengthening or shortening dump grate locking lug by drawing out or upsetting same.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4S514–13 Made. Rate.....

Includes getting material, bending, dressing and finishing complete, dump grate locking lug.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4S514–18 Straightened. Rate.....

Includes straightening old dump grate locking lug when same has become bent.

Forge:
1–Per first lug..... .....
2–Per lug after first one..... .....

4S514–21 Welded (break). Rate.....

Includes doing necessary scarfing, welding break in dump grate locking lug, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Grate, Dump

LUG, LOCKING

4S514–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate locking lug, dressing and finishing over weld complete.

Forge:

6–Per first place repaired..... .....
7–Per place repaired after first one..... .....

4S514–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dump grate locking lug, dressing and finishing over weld complete.

Forge:

12–Per first hole..... .....
13–Per hole after first one..... .....

GRATE RIGGING

Grate, Dump—Locking Lug

Grate, Dump
SHAFT

Dump Grate Shaft



4S524-4 Cut—Iron, and ground. **Rate**.....

Includes cutting iron at power shears for dump grate shaft, and grinding ends of same at emery wheel.

Power shears and emery wheel:
1–Per shaft..... .....

4S524-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening dump grate shaft by drawing out or upsetting same.

Forge:
1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S524-18 Straightened. **Rate**.....

Includes straightening old dump grate shaft when same has become bent.

Forge:
1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S524-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dump grate shaft, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

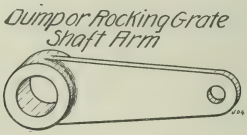
4S524-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate shaft, dressing and finishing over weld complete.

Forge:
5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

Grate, Dump·

SHAFT ARM



4S526–2 Bend changed. **Rate**.....

Includes changing bend in dump grate shaft arm.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S526–6 Dressed. **Rate**.....

Includes dressing and finishing complete, dump grate shaft arm after same has been forged.

Forge:

1–Per first arm..... .....
2–Per shaft arm after first one..... .....

4S526–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, ready for dressing, dump grate shaft arm.

Steam hammer:

1–Per first arm..... .....
2–Per arm after first one..... .....

Forge:

3–Per first arm..... .....
4–Per arm after first one..... .....

4S526–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, dump grate shaft arm.

Steam hammer:

8–Per first arm..... .....
9–Per arm after first one..... .....

Forge:

12–Per first arm..... .....
13–Per arm after first one..... .....

GRATE RIGGING

Grate, Dump—Shaft Arm

Grate, Dump
SHAFT ARM

4S526–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening dump grate shaft arm by drawing out or upsetting same.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S526–18 Straightened. **Rate**.....

Includes straightening old dump grate shaft arm when same has become bent.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S526–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dump grate shaft arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S526–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate shaft arm, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

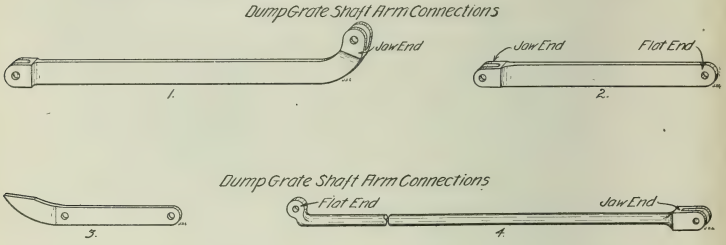
4S526–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dump grate shaft arm, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

Grate, Dump
SHAFT ARM CONNECTION



4S530–2 Bend changed. **Rate**.....

Includes changing bend in dump grate shaft arm connection.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per bend changed after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

4S530–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening dump grate shaft arm connection by drawing out or upsetting same.

Forge.

Per first connection:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per connection after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

GRATE RIGGING
Grate, Dump—Shaft Arm Connection

Grate, Dump
SHAFT ARM CONNECTION

4S530–13 Made. **Rate**.....

Includes getting material, forging, doing necessary welding, cutting jaw ends, bending, dressing and finishing complete, dump grate shaft arm connection.

Forge.

Per first connection:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per connection after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

4S530–18 Straightened. **Rate**.....

Includes straightening old grate dump shaft arm connection when same has become bent.

Forge.

Per first connection:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per connection after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

4S530–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in dump grate shaft arm connection, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....
10–As per sketch No. 4 .....

Grate, Dump
SHAFT ARM CONNECTION

4S530–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in dump grate shaft arm connection, dressing and finishing over weld complete.

Forge.

Per first place repaired:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....
17–As per sketch No. 3..... .....
18–As per sketch No. 4..... .....

Per place repaired after first one:

21–As per sketch No. 1..... .....
22–As per sketch No. 2..... .....
23–As per sketch No. 3..... .....
24–As per sketch No. 4..... .....

4S530–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in dump grate shaft arm connection, dressing and finishing over weld complete.

Forge.

Per first hole:

30–As per sketch No. 1, jaw end..... .....
31–As per sketch No. 2, jaw end..... .....
32–As per sketch No. 2, flat end..... .....
33–As per sketch No. 3, flat end..... .....
34–As per sketch No. 4, jaw end..... .....

Per hole after first one:

40–As per sketch No. 1, jaw end..... .....
41–As per sketch No. 2, jaw end..... .....
42–As per sketch No. 2, flat end..... .....
43–As per sketch No. 3, flat end..... .....
44–As per sketch No. 4, jaw end..... .....

4S530–21 Welded (new jaw end). **Rate**.....

Includes getting material, forging and dressing jaw end of dump grate shaft arm connection, doing necessary scarfing, welding jaw end on body of connection, dressing and finishing end to shape complete.

Forge.

Per first end:

50–As per sketch No. 1..... .....
51–As per sketch No. 2..... .....
52–As per sketch No. 4..... .....

Per end after first one:

56–As per sketch No. 1..... .....
57–As per sketch No. 2..... .....
58–As per sketch No. 4..... .....

GRATE RIGGING
Grate, Dump—Shaft Arm Connection

Grate, Dump
SHAFT ARM CONNECTION

4S530–21 Welded (new flat end). **Rate**.....

Includes doing necessary scarfing, welding material on end of dump grate shaft arm connection, dressing and finishing end to shape complete.

Forge.

Per first end:

61–As per sketch No. 2 ....
62–As per sketch No. 3 ....
63–As per sketch No. 4 ....

Per end after first one:

67–As per sketch No. 2 ....
68–As per sketch No. 3 ....
69–As per sketch No. 4 ....

Grate, Dump

SHAFT ARM CONNECTION—END, JAW

4S534–2 Bent. **Rate**.....

Includes changing dies in bulldozer and bending jaw end of dump grate shaft arm connection after iron has been cut and delivered to bulldozer.

Forge:

1–Per first jaw bent..... .....
2–Per jaw bent after first one..... .....

4S534–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for dump grate shaft arm connection jaw end.

Power shears:

1–Per piece cut..... .....

4S534–6 Dressed. **Rate**.....

Includes dressing and finishing complete jaw end of dump grate shaft arm connection after jaw has been forged.

Forge.

Per first end:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 4..... .....

Per end after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 4..... .....

4S534–9 Forged. **Rate**.....

Includes getting iron after same has been bent and punched, changing dies in forging machine and forging dump grate shaft arm connection jaw end complete.

Forging machine.

Per first end:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per end after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

GRATE RIGGING

Grate, Dump—Shaft Arm Connection Jaw End

Grate, Dump
SHAFT ARM CONNECTION—END, JAW

4S534–9 Forged (steam hammer). **Rate**.....

Includes getting material, blocking out and forging complete, ready for dressing, dump grate shaft arm connection jaw end.

Steam hammer.

Per first jaw end:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....
14–As per sketch No. 4..... .....

Per jaw end after first one:

18–As per sketch No. 1..... .....
19–As per sketch No. 2..... .....
20–As per sketch No. 4..... .....

Forge.

Per first jaw end:

25–As per sketch No. 1..... .....
26–As per sketch No. 2..... .....
27–As per sketch No. 4..... .....

Per jaw end after first one:

30–As per sketch No. 1..... .....
31–As per sketch No. 2..... .....
32–As per sketch No. 4..... .....

4S534–9 Forged and dressed. **Rate**.....

Includes getting material, forging, cutting jaw, dressing and finishing complete, dump grate shaft arm connection jaw end.

Forge.

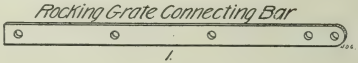
Per first jaw end:

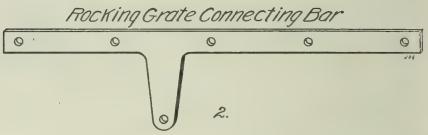
40–As per sketch No. 1..... .....
41–As per sketch No. 2..... .....
42–As per sketch No. 4..... .....

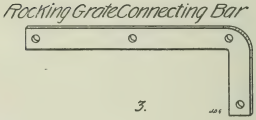
Per jaw end after first one:

46–As per sketch No. 1..... .....
47–As per sketch No. 2..... .....
48–As per sketch No. 4..... .....

Grate, Rocking
BAR, CONNECTING







4S560–2 Bend changed. **Rate**.....

Includes changing bend in rocking grate connecting bar.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per bend changed after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4S560–4 Cut—Iron, and ground. **Rate**.....

Includes cutting iron at power shears for rocking grate connecting bar, and grinding ends of same at emery wheel.

Power shears and emery wheel.

Per bar:

1–As per sketch No. 1..... .....

GRATE RIGGING
Grate, Rocking—Connecting Bar

Grate, Rocking
BAR, CONNECTING

4S560–9 Forged and dressed. **Rate**.....

Includes getting material, forging, doing necessary scarfing, welding lug on bar, dressing and finishing bar to shape complete.

Forge.

Per first bar:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bar after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4S560–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening rocking grate connecting bar by drawing out or upsetting same.

Forge.

Per first bar:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bar after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

4S560–18 Straightened. **Rate**.....

Includes straightening old rocking grate connecting bar when same has become bent or twisted.

Forge.

Per first bar:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bar after first one:

6–As per sketch No. 1 .....
7–As per sketch No. 2 .....
8–As per sketch No. 3 .....

Grate, Rocking
BAR, CONNECTING

4S560-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate connecting bar, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

560-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate connecting bar, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per place repaired after first one:

18–As per sketch No. 1 .....
19–As per sketch No. 2 .....
20–As per sketch No. 3 .....

4S560-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate connecting bar, dressing and finishing over weld complete.

Forge.

Per first hole:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....

Per hole after first one:

29–As per sketch No. 1 .....
30–As per sketch No. 2 .....
31–As per sketch No. 3 .....

GRATE RIGGING
Grate, Rocking—Connecting Bar

Grate, Rocking
LEVER, CONNECTING

Rocking Grate Connecting Lever



4S570–2 Bend changed. **Rate**.....

Includes changing bend in rocking grate connecting lever.

Forge:
1–Per first bend changed..... .....
5–Per bend changed after first one..... .....

4S570–6 Dressed. **Rate**.....

Includes dressing and finishing complete, rocking grate connecting lever.

Forge:
1–Per first lever..... .....
5–Per lever after first one..... .....

4S570–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, ready for dressing, rocking grate connecting lever.

Steam hammer:
1–Per first lever..... .....
3–Per lever after first one..... .....

Forge:
5–Per first lever..... .....
7–Per lever after first one..... .....

Grate, Rocking
LEVER, CONNECTING

4S570–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, rocking grate connecting lever.

Steam hammer:
10–Per first lever..... .....
14–Per lever after first one..... .....

Forge:
18–Per first lever..... .....
22–Per lever after first one..... .....

4S570–18 Straightened. **Rate**.....

Includes straightening old rocking grate connecting lever when same has become bent or twisted.

Forge:
1–Per first lever..... .....
5–Per lever after first one..... .....

4S570–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate connecting lever, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
5–Per place repaired after first one..... .....

4S570–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate connecting lever, dressing and finishing over weld complete.

Forge:
8–Per first place repaired..... .....
11–Per place repaired after first one..... .....

4S570–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate connecting lever, dressing and finishing over weld complete.

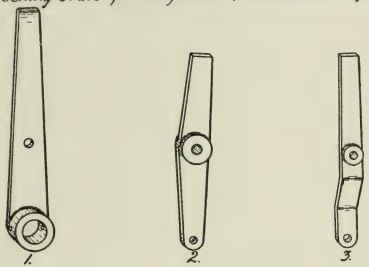
Forge.
Per first hole:
15–In center boss..... .....
16–In flat end..... .....

Per hole after first one:
20–In center boss..... .....
21–In flat end..... .....

GRATE RIGGING
Grate, Rocking—Connecting Lever

Grate, Rocking
LEVER, OPERATING

Rocking Grate Operating Levers (Grate Shaker Fingers)



4S576–2 Bend changed. **Rate**.....

Includes changing bend in rocking grate operating lever.

Forge.

Per first bend changed:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per bend changed after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4S576–6 Dressed. **Rate**.....

Includes dressing, bending and finishing rocking grate operating lever complete.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per lever after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Grate, Rocking
LEVER, OPERATING

4S576–9 Forged. **Rate**.....

Includes getting material, blocking out and forging rocking grate operating lever complete, ready for dressing.

Steam hammer.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per lever after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Forge.

Per first lever:

12–As per sketch No. 1 .....
13–As per sketch No. 2 .....
14–As per sketch No. 3 .....

Per lever after first one:

17–As per sketch No. 1 .....
18–As per sketch No. 2 .....
19–As per sketch No. 3 .....

4S576–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing rocking grate operating lever complete.

Steam hammer.

Per first lever:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....

Per lever after first one:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3 .....

Forge.

Per first lever:

37–As per sketch No. 1 .....
38–As per sketch No. 2 .....
39–As per sketch No. 3 .....

Per lever after first one:

45–As per sketch No. 1 .....
46–As per sketch No. 2 .....
47–As per sketch No. 3 .....

GRATE RIGGING

Grate, Rocking—Operating Lever

Grate, Rocking
LEVER, OPERATING

4S576–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening rocking grate operating lever by drawing out or upsetting same.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per lever after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4S576–18 Straightened. **Rate**.....

Includes straightening old rocking grate operating lever when same has become bent or twisted.

Forge.

Per first lever:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per lever after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4S576–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate operating lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per place repaired after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

Grate, Rocking
LEVER, OPERATING

4S576–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate operating lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

13–As per sketch No. 1 .....
14–As per sketch No. 2 .....
15–As per sketch No. 3 .....

Per place repaired after first one:

17–As per sketch No. 1 .....
18–As per sketch No. 2 .....
19–As per sketch No. 3 .....

4S576–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate operating lever, dressing and finishing over weld complete.

Forge.

Per first hole plugged in boss end:

22–As per sketch No. 1 .....
23–As per sketch No. 2 .....
24–As per sketch No. 3 .....

Per first hole plugged in flat end:

27–As per sketch No. 1 .....
28–As per sketch No. 2 .....
29–As per sketch No. 3 .....

Per hole plugged after first one in boss end:

35–As per sketch No. 1 .....
36–As per sketch No. 2 .....
37–As per sketch No. 3 .....

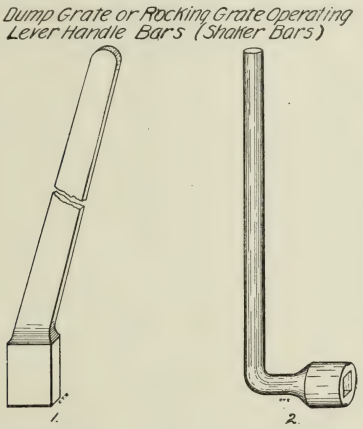
Per hole plugged after first one in flat end:

40–As per sketch No. 1 .....
41–As per sketch No. 2 .....
42–As per sketch No. 3 .....

GRATE RIGGING
Grate, Rocking—Operating Lever

Grate, Rocking

LEVER, OPERATING—BAR, HANDLE (SHAKER BAR)



4S580–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending iron for socket end of rocking grate operating lever handle bar complete, after iron has been cut and delivered to bulldozer.

Bulldozer.

Per first end:

1–As per sketch No. 1..... .....

Per end after first one:

3–As per sketch No. 1..... .....

4S580–2 Bent (at bulldozer) (after handles have been forged down).
Rate.....

Includes changing dies in bulldozer and bending box end of rocking grate operating lever handle bar after same has been welded on handle and handle forged down.

Bulldozer.

Per first bar:

7–As per sketch No. 1..... .....

Per bar after first one:

9–As per sketch No. 1..... .....

GRATE RIGGING

Grate, Rocking—Operating Lever Handle Bar

Grate, Rocking

LEVER, OPERATING—BAR, HANDLE (SHAKER BAR)

4S580–2 Bend changed. **Rate**.....

Includes changing bend in rocking grate operating lever handle bar.

Forge.

Per first bend changed:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....

Per bend changed after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4S580–3 Closed—Hole. **Rate**.....

Includes closing hole in boss or socket end of rocking grate operating lever handle bar.

Forge.

Per first hole closed:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hole closed after first one:

3–As per sketch No. 1..... .....
4–As per sketch No. 2..... .....

4S580–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for rocking grate operating lever handle bar.

Power shears.

Per piece cut:

1–Socket end..... .....
2–Handle end..... .....

4S580–9 Forged (at machine). **Rate**.....

Includes getting box end of rocking grate operating lever handle bar after same has been bent, and getting handle after same has been cut, changing dies in forming machine and forming and welding box on handle complete.

Machine.

Per first bar:

1–As per sketch No. 1..... .....

Per bar after first one:

5–As per sketch No. 1..... .....

GRATE RIGGING

Grate, Rocking—Operating Lever Handle Bar

Grate, Rocking
LEVER, OPERATING—BAR, HANDLE (SHAKER BAR)

4S580–9 Forged (forging handles down). **Rate**.....

Includes forging down handles of rocking grate operating lever handle bar after box end is welded on at machine.

Steam hammer.

Per first bar:

8–As per sketch No. 1..... .....

Per bar after first one:

12–As per sketch No. 1..... .....

4S580–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening rocking grate operating lever handle bar by drawing out or upsetting same.

Forge.

Per first bar:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bar after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4S580–13 Made. **Rate**.....

Includes getting all material, bending, welding and dressing box end, doing necessary scarfing, welding box end on handle of rocking grate operating lever handle bar, and dressing bar to shape complete.

Forge.

Per first bar:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bar after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4S580–18 Straightened. **Rate**.....

Includes straightening old rocking grate operating lever handle bar when same has become bent.

Forge.

Per first bar:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per bar after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Grate, Rocking

LEVER, OPERATING—BAR, HANDLE (SHAKER BAR)

4S580–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate operating lever handle bar, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4S580–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate operating lever handle bar, dressing and finishing over weld complete.

Forge.

Per first place repaired:

8–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

Per place repaired after first one:

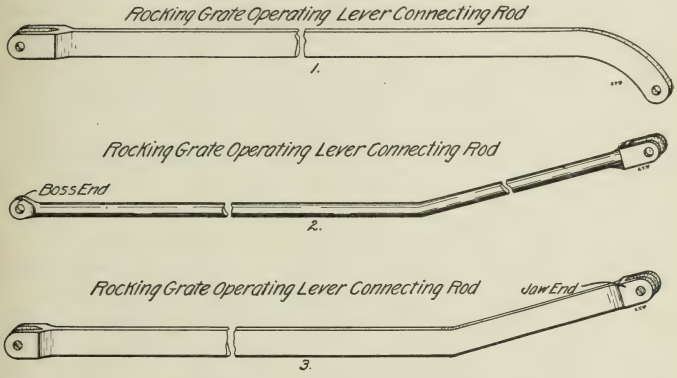
12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....

GRATE RIGGING

Grate, Rocking—Operating Lever Handle Bar

Grate, Rocking

LEVER, OPERATING—ROD, CONNECTING



4S586-2 Bend changed. **Rate**.....

Includes changing bend in rocking grate operating lever connecting rod.

Forge.

Per first rod:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....

Per rod after first one:

7–As per sketch No. 1 ....
8–As per sketch No. 2 ....
9–As per sketch No. 3 ....

4S586-6 Dressed (boss end). **Rate**.....

Includes flattening boss end of rocking grate operating lever connecting rod, dressing and finishing end to shape complete.

Forge.

Per first end:

1–As per sketch No. 2 ....

Per end after first one:

5–As per sketch No. 2 ....

Grate, Rigging

LEVER, OPERATING—ROD, CONNECTING

4S586-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening rocking grate operating lever connecting rod by drawing out or upsetting same.

Forge.

Per first rod:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per rod after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4S586-13 Made. **Rate**.....

Includes getting all material, blocking out and forging jaw or boss ends of rocking grate operating lever connecting rod, welding ends on body of rod, dressing and finishing rod to shape complete.

Forge.

Per first rod:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per rod after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4S586-18 Straightened. **Rate**.....

Includes straightening old rocking grate operating lever connecting rod when same has become bent.

Forge.

Per first rod:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....

Per rod after first one:

7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

GRATE RIGGING

Grate, Rocking—Operating Lever Connecting Rod

Grate, Rocking
LEVER, OPERATING—ROD, CONNECTING

4S586-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate operating lever connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per place repaired after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4S586-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate operating lever connecting rod, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....
14–As per sketch No. 3..... .....

Per place repaired after first one:..... .....

17–As per sketch No. 1..... .....
18–As per sketch No. 2..... .....
19–As per sketch No. 3..... .....

4S586-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate operating lever connecting rod, dressing and finishing over weld complete.

Forge.

Per first hole:

In jaw end:

25–As per sketch No. 1..... .....
26–As per sketch No. 2..... .....
27–As per sketch No. 3..... .....

In flat end:

30–As per sketch No. 1..... .....

Per hole after first one.

In jaw end:

33–As per sketch No. 1..... .....
34–As per sketch No. 2..... .....
35–As per sketch No. 3..... .....

In flat end:

38–As per sketch No. 1..... .....

Grate, Rocking
LEVER, OPERATING—ROD, CONNECTING

4S586–21 Welded (new jaw end) (making included). **Rate**.....

Includes getting material and forging complete, jaw end of rocking grate operating lever connecting rod, doing necessary scarfing, welding jaw end on body of rod, dressing and finishing end to shape complete.

Forge.

Per first end:

42–As per sketch No. 1..... .....
43–As per sketch No. 2..... .....
44–As per sketch No. 3..... .....

Per end after first one:

47–As per sketch No. 1..... .....
48–As per sketch No. 2..... .....
49–As per sketch No. 3..... .....

4S586–21 Welded (new boss end) (making included). **Rate**.....

Includes getting material, welding necessary stock on boss end of rocking grate operating lever connecting rod, dressing and finishing end to shape complete.

Forge.

Per first end:

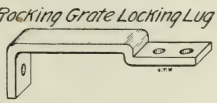
54–As per sketch No. 2..... .....

Per end after first one:

57–As per sketch No. 2..... .....

GRATE RIGGING
Grate, Rocking—Operating Lever Connecting Rod

Grate, Rocking
LUG, LOCKING



4S590–2 Bend changed. **Rate**.....

Includes changing bend in rocking grate locking lug.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S590–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening rocking grate locking lug.

Forge:

1–Per first lug..... .....
2–Per lug after first one..... .....

4S590–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, rocking grate locking lug.

Forge:

1–Per first lug..... .....
2–Per lug after first one..... .....

4S590–18 Straightened. **Rate**.....

Includes straightening old rocking grate locking lug when same has become bent or twisted.

Forge:

1–Per first lug..... .....
2–Per lug after first one..... .....

4S590–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate locking lug, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Grate, Rocking

LUG, LOCKING

4S590–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate locking lug, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S590–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate locking lug, dressing and finishing over weld complete.

Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

GRATE RIGGING

Grate, Rocking—Locking Lug

Grate, Rocking
SHAFT

Rocking Grate Shaft



4S594-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for rocking grate shaft.

Power shears:
1–Per piece cut..... .....

4S594-18 Straightened. **Rate**.....

Includes straightening old rocking grate shaft when same has become bent or twisted.

Forge:
1–Per first shaft..... .....
2–Per shaft after first one..... .....

4S594-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate shaft, dressing and finishing over weld complete.

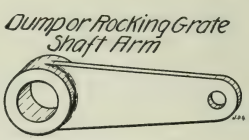
Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S594-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate shaft, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Grate, Rocking
SHAFT ARM



4S596–2 Bend changed. **Rate**.....

Includes changing bend in rocking grate shaft arm.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4S596–6 Dressed. **Rate**.....

Includes dressing and finishing complete, rocking grate shaft arm.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S596–9 Forged. **Rate**.....

Includes getting material, blocking out and forging rocking grate shaft arm complete, ready for dressing.

Steam hammer:

1–Per first arm..... .....
2–Per arm after first one..... .....

Forge:

3–Per first arm..... .....
4–Per arm after first one..... .....

4S596–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing rocking grate shaft arm complete.

Steam hammer:

7–Per first arm..... .....
8–Per arm after first one..... .....

Forge:

10–Per first arm..... .....
11–Per arm after first one..... .....

GRATE RIGGING
Grate, Rocking—Shaft Arm

Grate, Rocking
SHAFT ARM

4S596–18 Straightened. **Rate**.....

Includes straightening old rocking grate shaft arm when same has become bent or twisted.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4S596–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in rocking grate shaft arm, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4S596–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate shaft arm, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4S596–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate shaft arm, dressing and finishing over weld complete.

Forge.

Per first hole:

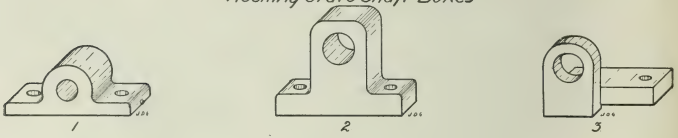
10–In center boss..... .....
11–In flat end..... .....

Per hole after first one:

13–In center boss..... .....
14–In flat end..... .....

Grate, Rocking
SHAFT BOX

Rocking Grate Shaft Boxes



4S598–2 Dressed. **Rate**.....

Includes dressing and finishing rocking grate shaft box complete.

Forge.

Per first box:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per box after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4S598–9 Forged. **Rate**.....

Includes getting material, blocking out and forging rocking grate shaft box complete, ready for dressing.

Steam hammer.

Per first box:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per box after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Forge.

Per first box:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

Per box after first one:

13–As per sketch No. 1..... .....
14–As per sketch No. 2..... .....

GRATE RIGGING
Grate, Rocking—Shaft Box

Grate, Rocking
SHAFT BOX

4S598-9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing rocking grate shaft box complete.

Steam hammer.

Per first box:

16–As per sketch No. 1..... .....
17–As per sketch No. 2..... .....

Per box after first one:

19–As per sketch No. 1..... .....
20–As per sketch No. 2..... .....

Forge.

Per first box:

23–As per sketch No, 1..... .....
24–As per sketch No. 2..... .....

Per box after first one:

27–As per sketch No. 1..... .....
28–As per sketch No. 2..... .....

4S598-13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing rocking grate shaft box complete.

Forge.

Per first box:

1–As per sketch No. 3..... .....

Per box after first one:

5–As per sketch No. 3..... .....

4S598-18 Straightened. **Rate**.....

Includes straightening old rocking grate shaft box when same has become bent or twisted.

Forge.

Per first box:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per box after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

Grate, Rocking
SHAFT BOX

4S598–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in rocking grate shaft box, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per place repaired after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....

4S598–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in rocking grate shaft box, dressing and finishing over weld complete.

Forge.

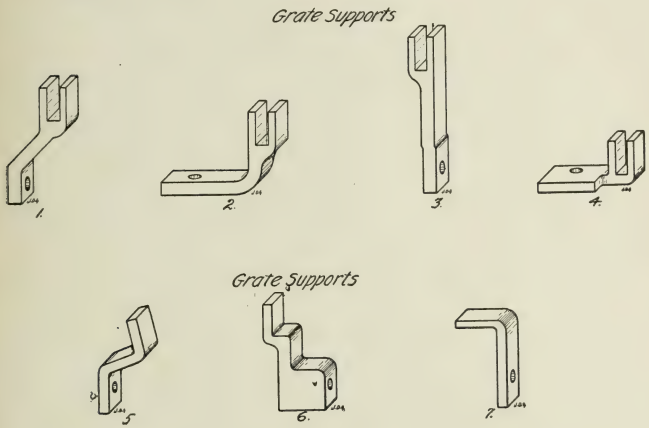
Per first hole:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....
14–As per sketch No. 3..... .....

Per hole after first one:

18–As per sketch No. 1..... .....
19–As per sketch No. 2..... .....
20–As per sketch No. 3..... .....

Grate
SUPPORT



4S650–2 Bend changed. **Rate**.....

Includes changing bend in grate support.

Forge:

1–Per first bend changed, all sketches..... .....
10–Per bend changed after first one, all sketches..... .....

4S650–6 Dressed. **Rate**.....

Includes bending, cutting out jaw if necessary, dressing and finishing complete, grate support, after same has been forged.

Forge.

Per first support.

When jaw is cut:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

When jaw is not cut:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....
9–As per sketch No. 3..... .....
10–As per sketch No. 4..... .....
11–As per sketch No. 6..... .....

GRATE RIGGING
Grate Support

Grate
SUPPORT

Per support after first one.

When jaw is cut:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....
18–As per sketch No. 4 .....

When jaw is not cut:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....
28–As per sketch No. 4 .....
29–As per sketch No. 6 .....

4S650–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, grate support ready for dressing.

Steam hammer.

Per first support.

When jaw is cut:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....

When jaw is not cut:

8–As per sketch No. 1 .....
9–As per sketch No. 2 .....
10–As per sketch No. 3 .....
11–As per sketch No. 4 .....
12–As per sketch No. 6 .....

Per support after first one.

When jaw is cut:

15–As per sketch No. 1 .....
16–As per sketch No. 2 .....
17–As per sketch No. 3 .....
18–As per sketch No. 4 .....

When jaw is not cut:

25–As per sketch No. 1 .....
26–As per sketch No. 2 .....
27–As per sketch No. 3 .....
28–As per sketch No. 4 .....
29–As per sketch No. 6 .....

GRATE RIGGING
Grate Support

Grate

SUPPORT

Forge.

Per first support.

When jaw is cut:

35–As per sketch No. 1 .....
36–As per sketch No. 2 .....
37–As per sketch No. 3 .....
38–As per sketch No. 4 .....

When jaw is not cut:

45–As per sketch No. 1 .....
46–As per sketch No. 2 .....
47–As per sketch No. 3 .....
48–As per sketch No. 4 .....
49–As per sketch No. 6 .....

Per support after first one.

When jaw is cut:

55–As per sketch No. 1 .....
56–As per sketch No. 2 .....
57–As per sketch No. 3 .....
58–As per sketch No. 4 .....

When jaw is not cut:

65–As per sketch No. 1 .....
66–As per sketch No. 2 .....
67–As per sketch No. 3 .....
68–As per sketch No. 4 .....
69–As per sketch No. 6 .....

4S650–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing complete, grate support.

Steam hammer.

Per first support:

72–As per sketch No. 6 .....

Per support after first one:

76–As per sketch No. 6 .....

Forge.

Per first support:

80–As per sketch No. 1 .....
81–As per sketch No. 2 .....
82–As per sketch No. 3 .....
83–As per sketch No. 4 .....
84–As per sketch No. 6 .....

GRATE RIGGING

Grate Support

Grate

SUPPORT

Per support after first one:

90–As per sketch No. 1.....
91–As per sketch No. 2.....
92–As per sketch No. 3.....
93–As per sketch No. 4.....
94–As per sketch No. 6.....

4S650–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening grate support by drawing out or upsetting same.

Forge.

Per first support:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....
7–As per sketch No. 7.....

Per support after first one:

10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....
14–As per sketch No. 5.....
15–As per sketch No. 6.....
16–As per sketch No. 7.....

4S650–13 Made (from bar iron). **Rate**.....

Includes getting material, doing necessary welding, bending, dressing and finishing grate support complete.

Forge.

Per first support:

1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 7.....

Per support after first one:

11–As per sketch No. 1.....
12–As per sketch No. 2.....
13–As per sketch No. 3.....
14–As per sketch No. 4.....
15–As per sketch No. 5.....
16–As per sketch No. 7.....

GRATE RIGGING

Grate Support

Grate
SUPPORT

4S650–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in grate support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....
6–As per sketch No. 6 .....
7–As per sketch No. 7 .....

Per place repaired after first one:

11–As per sketch No. 1 .....
12–As per sketch No. 2 .....
13–As per sketch No. 3 .....
14–As per sketch No. 4 .....
15–As per sketch No. 5 .....
16–As per sketch No. 6 .....
17–As per sketch No. 7 .....

4S650–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in grate support, dressing and finishing over weld complete.

Forge.

Per first place repaired:

20–As per sketch No. 1 .....
21–As per sketch No. 2 .....
22–As per sketch No. 3 .....
23–As per sketch No. 4 .....
24–As per sketch No. 5 .....
25–As per sketch No. 6 .....
26–As per sketch No. 7 .....

Per place repaired after first one:

30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3 .....
33–As per sketch No. 4 .....
34–As per sketch No. 5 .....
35–As per sketch No. 6 .....
36–As per sketch No. 7 .....

GRATE RIGGING
Grate Support

Grate

SUPPORT

4S650-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in grate support, dressing and finishing over weld complete.

Forge.

Per first hole:

40–As per sketch No. 1..... .....
41–As per sketch No. 2..... .....
42–As per sketch No. 3..... .....
43–As per sketch No. 4..... .....
44–As per sketch No. 5..... .....
45–As per sketch No. 6..... .....
46–As per sketch No. 7..... .....

Per hole after first one:

50–As per sketch No. 1..... .....
51–As per sketch No. 2..... .....
52–As per sketch No. 3..... .....
53–As per sketch No. 4..... .....
54–As per sketch No. 5..... .....
55–As per sketch No. 6..... .....
56–As per sketch No. 7..... .....

GRATE RIGGING

Grate Support

TENDER

TENDER

Hand Brake

ROD, TRUCK BRAKE



4U10–6 Dressed and welded. **Rate**.....

Includes getting boss end after same has been forged, and rod, welding boss end on hand brake truck brake rod, bending rod, dressing and finishing complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4U10–9 Forged (boss end). **Rate**.....

Includes getting material, blocking out and forging complete, boss end of hand brake truck brake rod, ready for welding.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4U10–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening hand brake truck brake rod by drawing out or upsetting same.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4U10–13 Made complete. **Rate**.....

Includes getting all material, blocking out, forging boss end, bending end, welding boss end on hand brake truck brake rod, dressing and finishing to shape complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

Hand Brake

ROD, TRUCK BRAKE

4U10-18 Straightened. **Rate**.....

Includes straightening old hand brake truck brake rod when same has become bent or twisted.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4U10-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in hand brake truck brake rod, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U10-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in hand brake truck brake rod, dressing and finishing over weld complete.

Forge:

5–Per first hole plugged..... .....
6–Per hole plugged after first one..... .....

4U10-21 Welded (new boss end). **Rate**.....

Includes getting new boss end after same has been forged, doing necessary scarfing, welding boss on hand brake truck brake rod, dressing and finishing complete.

Forge:

9–Per first end..... .....
10–Per end after first one..... .....

TENDER BRAKES

Hand Brake Truck Brake Rod

Hand Brake STAFF

Tender Hand Brake Staff



4U14–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender hand brake staff.

Power shears:
1–Per piece cut..... .....

4U14–9 Forged (ring end) (at forge). **Rate**.....

Includes getting material, blocking out and forging complete, ring end of tender hand brake staff.

Forge:
1–Per first end..... .....
2–Per end after first one..... .....

4U14–9 Forged (ring end) (at machine). **Rate**.....

Includes changing dies in machine and forging tender hand brake staff in forging machine after iron has been cut and delivered to machine.

Machine:
5–Per first end..... .....
6–Per end after first one..... .....

4U14–9 Forged (taper end). **Rate**.....

Includes getting material and forging end of tender hand brake staff at forge complete.

Steam hammer:
9–Per first end..... .....
10–Per end after first one..... .....

Forge:
14–Per first end..... .....
15–Per end after first one..... .....

4U14–18 Straightened. **Rate**.....

Includes straightening old tender hand brake staff when same has become bent.

Forge:
1–Per first staff..... .....
2–Per staff after first one..... .....

Hand Brake
STAFF

4U14–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender hand brake staff, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U14–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender hand brake staff, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U14–21 Welded (parts together). **Rate**.....

Includes getting ring and taper end of tender hand brake staff after same have been forged, and getting body of tender hand brake staff, welding ends on body, dressing and finishing staff complete.

Forge:

9–Per first weld..... .....
10–Per weld after first one..... .....

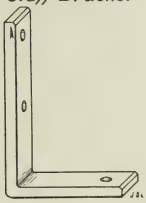
Steam hammer:

13–Per first weld..... .....
14–Per weld after first one..... .....

TENDER BRAKES
Hand Brake Staff

Hand Brake
STAFF BRACKET

Tender Hand Brake Staff Bracket



4U16–2 Bend changed. **Rate**.....

Includes changing bend in tender hand brake staff bracket.

Forge:
1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U16–2 Bent. **Rate**.....

Includes changing dies in machine and bending tender hand brake staff bracket after iron has been cut and delivered to machine.

Bulldozer:
5–Per first bracket..... .....
6–Per bracket after first one..... .....

4U16–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender hand brake staff bracket.

Power shears:
1–Per piece cut..... .....

4U16–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender hand brake staff bracket by drawing out or upsetting same.

Forge:
1–Per first bracket..... .....
2–Per bracket after first one..... .....

Hand Brake
STAFF BRACKET

4U16–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, tender hand brake staff bracket.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U16–18 Straightened. **Rate**.....

Includes straightening old tender hand brake staff bracket when same has become bent or twisted.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U16–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender hand brake staff bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U16–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender hand brake staff bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U16–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender hand brake staff bracket, dressing and finishing over weld complete.

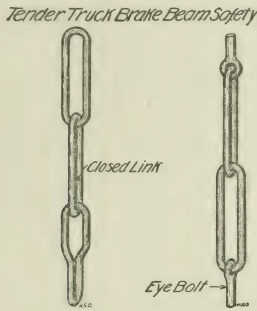
Forge:

9–Per first hole plugged..... .....
10–Per hole plugged after first one..... .....

TENDER BRAKES
Hand Brake Staff Bracket

Truck Brake

BEAM—CHAIN, SAFETY—BOLT, EYE



4U30-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake beam safety chain eye bolt.

Power shears:

1–Per piece cut..... .....

4U30-13 Made. **Rate**.....

Includes changing dies in machine and bending and finishing complete, truck brake beam safety chain eye bolt, as per sketch No. 2.

Forge:

1–Per first bolt..... .....
2–Per bolt after first one..... .....

Machine:

3–Per first bolt..... .....
4–Per bolt after first one..... .....

4U30-18 Straightened. **Rate**.....

Includes straightening old truck brake beam safety chain eye bolt as per sketch No. 2, when bolt has become bent or twisted.

Forge.

1–Per first bolt..... .....
5–Per bolt after first one..... .....

Truck Brake

BEAM—CHAIN, SAFETY—HOOK

4U34–2 Bent (at forge). **Rate**.....

Includes getting iron for truck brake beam safety chain hook after same has been cut to length, and bending hook at forge complete.

Forge:

1–Per first hook..... .....
2–Per hook after first one..... .....

4U34–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer, getting iron for truck brake beam safety chain hook, and bending iron to form hook complete.

Bulldozer:

5–Per first hook..... .....
6–Per hook after first one..... .....

4U34–4 Cut—Iron. **Rate**.....

Includes getting material and cutting to length, iron for truck brake beam safety chain hook.

Power shears:

1–Per piece cut..... .....

TENDER BRAKES

Truck Brake Beam Safety Chain Hook

Truck Brake

BEAM—CHAIN, SAFETY—LINK CLOSED

4U38–2 Bent. **Rate**.....

Includes changing dies in bulldozer, bending link for truck brake beam safety chain closed link at bulldozer after iron has been cut and delivered.

Bulldozer.

Per first link:

1–As per sketch No. 1, top link..... .....
2–As per sketch No. 1, bottom link..... .....
3–As per sketch No. 2..... .....

Per link after first one:

7–As per sketch No. 1, top link..... .....
8–As per sketch No. 1, bottom link..... .....
9–As per sketch No. 2..... .....

4U38–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake beam safety chain closed link.

Power shears.

Per piece cut:

1–As per sketch No. 1, top link..... .....
2–As per sketch No. 1, bottom link..... .....
3–As per sketch No. 2..... .....

4U38–13 Made. **Rate**.....

Includes getting material, bending, welding, dressing and finishing complete, truck brake beam safety chain closed link.

Forge.

Per first link:

1–As per sketch No. 1, top link..... .....
2–As per sketch No. 1, bottom link..... .....
3–As per sketch No. 2..... .....

Per link after first one:

7–As per sketch No. 1, top link..... .....
8–As per sketch No. 1, bottom link..... .....
9–As per sketch No. 2..... .....

4U38–18 Straightened. **Rate**.....

Includes straightening old truck brake beam safety chain closed link when same has become bent or twisted.

Forge.

Per first link:

1–As per sketch No. 1, top link..... .....
2–As per sketch No. 1, bottom link..... .....
3–As per sketch No. 2..... .....

Truck Brake
BEAM—CHAIN, SAFETY—LINK, CLOSED

Per link after first one:
7–As per sketch No. 1, top link ....
8–As per sketch No. 1, bottom link ....
9–As per sketch No. 2 ....

4U38–21 Welded (after bent at bulldozer). **Rate** .....

Includes getting truck brake beam safety chain closed link after same has been bent at bulldozer, doing necessary scarfing, welding link together, dressing and finishing complete.

Forge.

Per first link:
1–As per sketch No. 1, top link ....
2–As per sketch No. 1, bottom link ....
3–As per sketch No. 2 ....

Per link after first one:
7–As per sketch No. 1, top link ....
8–As per sketch No. 1, bottom link ....
9–As per sketch No. 2 ....

4U38–21 Welded (break). **Rate** .....

Includes doing necessary scarfing, welding break in truck brake beam safety chain closed link, dressing and finishing over weld complete.

Forge.

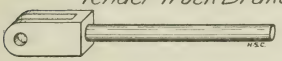
Per first place repaired:
12–As per sketch No. 1, top link ....
13–As per sketch No. 1, bottom link ....
14–As per sketch No. 2 ....

Per place repaired after first one:
18–As per sketch No. 1, top link ....
19–As per sketch No. 1, bottom link ....
20–As per sketch No. 2 ....

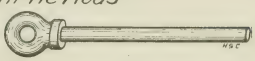
TENDER BRAKES
Truck Brake Beam Safety Chain Closed Link

Truck Brake
BEAM—ROD, TIE

Tender Truck Brake Beam Tie Rods



1.



2.

4U60–2 Bent (jaw end). **Rate**.....

Includes changing dies in machine and bending iron for jaw end of truck brake beam tie rod at bulldozer after iron has been cut and punched.

Bulldozer.
Per first end:
1–As per sketch No. 1..... .....
Per end after first one:
5–As per sketch No. 1..... .....

4U60–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake beam tie rod.

Power shears:
1–Per piece cut..... .....

4U60–6 Dressed. **Rate**.....

Includes dressing and finishing truck brake beam tie rod jaw end after same has been forged solid.

Forge.
Per first end:
1–As per sketch No. 1..... .....
Per end after first one:
6–As per sketch No. 1..... .....

4U60–9 Forged. **Rate**.....

Includes changing dies in machine and forging complete, truck brake beam tie rod jaw end after iron for same has been cut, punched and bent.

Machine.
Per first rod:
1–As per sketch No. 1..... .....
Per rod after first one:
5–As per sketch No. 1..... .....

Truck Brake

BEAM—ROD, TIE

4U60–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, ready for dressing, truck brake beam tie rod end.

Steam hammer.

Per first end:

7–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

Per end after first one:

12–As per sketch No. 1..... .....
15–As per sketch No. 2..... .....

Forge.

Per first end:

18–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....

Per end after first one:

25–As per sketch No. 1..... .....
27–As per sketch No. 2..... .....

4U60–9 Forged (at Bradley hammer). **Rate**.....

Includes getting material and forging truck brake beam tie rod complete, at Bradley hammer.

Bradley hammer.

Per first tie rod:

30–As per sketch No. 2..... .....

Per tie rod after first one:

33–As per sketch No. 2..... .....

4U60–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, truck brake beam tie rod.

Forge.

Per first rod:

40–As per sketch No. 1, forged solid..... .....
41–As per sketch No. 2..... .....

Per rod after first one:

45–As per sketch No. 1, forged solid..... .....
46–As per sketch No. 2..... .....

TENDER BRAKES

Truck Brake Beam Tie Rod

Truck Brake
BEAM—ROD, TIE

4U60–11 Ground. **Rate**.....

Includes grinding at emery wheel complete, truck brake beam tie rod.

Emery wheel.
Per first tie rod:
1–As per sketch No. 2..... .....
Per tie rod after first one:
5–As per sketch No. 2..... .....

4U60–13 Made (after punched and trimmed). **Rate**.....

Includes getting iron for truck brake beam tie rod after same has been punched and trimmed, getting other material, doing necessary scarfing, welding and finishing truck brake beam tie rod complete.

Steam hammer.
Per first tie rod:
1–As per sketch No. 2..... .....
Per tie rod after first one:
5–As per sketch No. 2..... .....

4U60–13 Made (from bar iron). **Rate**.....

Includes getting bar iron and making truck brake beam tie rod complete.

Forge.
Per first tie rod:
7–As per sketch No. 2..... .....
Per tie rod after first one:
9–As per sketch No. 2..... .....

4U60–15 Punched (iron for tie bar). **Rate**.....

Includes changing dies in power punch and punching iron for truck brake beam tie bar complete, after iron has been cut and delivered to power punch.

Power punch.
Per first tie rod:
1–As per sketch No. 2..... .....
Per tie rod after first one:
5–As per sketch No. 2..... .....

Truck Brake

BEAM—ROD, TIE

4U60–15 Punched (web from hole). **Rate**.....

Includes punching out web in hole of truck brake beam tie rod.

Forge.

Per first hole:

8–As per sketch No. 2..... .....

Per hole after first one:

12–As per sketch No. 2..... .....

4U60–18 Straightened. **Rate**.....

Includes straightening old truck brake beam tie rod when same has become bent.

Forge.

Per first rod:

1–As per sketch No. 1..... .....

2–As per sketch No. 2..... .....

Per rod after first one:

5–As per sketch No. 1..... .....

6–As per sketch No. 2..... .....

4U60–19b Trimmed. **Rate**.....

Includes changing dies in power punch and trimming iron for truck brake beam tie rod complete, after iron has been punched.

Power punch.

Per first tie rod:

1–As per sketch No. 2..... .....

Per tie rod after first one:

5–As per sketch No. 2..... .....

4U60–21 Welded (new straight end). **Rate**.....

Includes getting round iron, doing necessary scarfing, welding straight end on truck brake beam tie rod, dressing and finishing over weld complete.

Forge.

Per first end:

1–As per sketch No. 1..... .....

2–As per sketch No. 2..... .....

Per end after first one:

5–As per sketch No. 1..... .....

6–As per sketch No. 2..... .....

TENDER BRAKES

Truck Brake Beam Tie Rod

Truck Brake
BEAM—ROD, TRUSS



4U62-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake beam truss rod.

Power shears:

1–Per piece cut..... .....

4U62-21 Welded (break). **Rate**.....

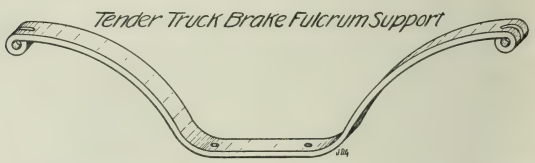
Includes doing necessary scarfing, welding break in truck brake beam truss rod, dressing and finishing over weld complete.

Forge:

1–Per first weld..... .....

2–Per weld after first one..... .....

Truck Brake
FULCRUM SUPPORT



4U80–2 Bend changed. **Rate**.....

Includes changing bend in truck brake fulcrum support.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U80–2 Bent (bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending truck brake fulcrum support after iron has been cut and delivered.

Bulldozer:

5–Per first support..... .....
6–Per support after first one..... .....

4U80–6 Dressed. **Rate**.....

Includes cutting slot in ends of truck brake fulcrum support, bending eye and finishing ends complete, after support has been forged.

Forge:

1–Per first support..... .....
2–Per support after first one..... .....

4U80–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake fulcrum support by drawing out or upsetting same.

Forge:

1–Per first support..... .....
2–Per support after first one..... .....

4U80–13 Made. **Rate**.....

Includes getting material, cutting ends, bending, dressing and finishing truck brake fulcrum support complete.

Forge:

1–Per first support..... .....
2–Per support after first one..... .....

TENDER BRAKES
Truck Brake Fulcrum Support

Truck Brake
FULCRUM SUPPORT

4U80-18 Straightened. **Rate**.....

Includes straightening old truck brake fulcrum support when same has become bent.

Forge:

1–Per first support..... .....
2–Per support after first one..... .....

4U80-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake fulcrum support, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U80-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake fulcrum support, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U80-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake fulcrum support, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

4U80-21 Welded (new end). **Rate**.....

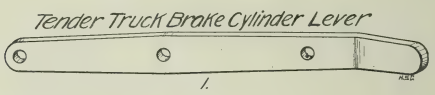
Includes getting material, cutting and bending new end, welding end on body of truck brake fulcrum support, dressing and finishing end to shape complete.

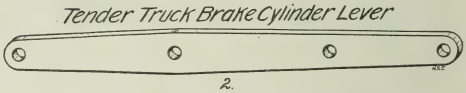
Forge:

15–Per first end..... .....
16–Per end after first one..... .....

Truck Brake

LEVER, CYLINDER





4U90–2 Bent. **Rate**.....

Includes bending truck brake cylinder lever after same has been made.

Forge.

Per first bend:

1–As per sketch No. 1..... .....

Per first bend after first one:

5–As per sketch No. 1..... .....

4U90–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake cylinder lever.

Power shears.

Per piece cut:

1–As per sketch No. 1..... .....
5–As per sketch No. 2..... .....

4U90–9 Forged (at lever roller). **Rate**.....

Includes heating material after same has been delivered to lever roller, rolling cylinder lever to shape, and dressing ends complete.

Lever roller.

Per first lever:

1–As per sketch No. 1..... .....
5–As per sketch No. 2..... .....

Per lever after first one:

7–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

TENDER BRAKES

Truck Brake—Lever, Cylinder

Truck Brake
LEVER, CLYINDER

4U90–9 Forged and dressed. **Rate**.....

Includes getting material, forging, dressing and finishing complete, truck brake cylinder lever.

Steam hammer.

Per first lever:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....

Per lever after first one:

17–As per sketch No. 1..... .....
19–As per sketch No. 2..... .....

Forge.

Per first lever:

21–As per sketch No. 1..... .....
25–As per sketch No. 2..... .....

Per lever after first one:

28–As per sketch No. 1..... .....
29–As per sketch No. 2..... .....

4U90–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake cylinder lever by drawing out or upsetting same.

Forge.

Per first lever:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lever after first one:

7–As per sketch No. 1..... .....
9–As per sketch No. 2..... .....

4U90–14b. Plugged cold—Holes. **Rate**.....

Includes making plug, heating same and driving in hole in truck brake cylinder lever complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Truck Brake
LEVER, CYLINDER

4U90–18 Straightened. **Rate**.....

Includes straightening old truck brake cylinder lever when same has become bent or twisted.

Forge.

Per first lever:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lever after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U90–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake cylinder lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lever after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U90–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake cylinder lever, dressing and finishing over weld complete.

Forge.

Per first place repaired:

9–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....

Per place repaired after first one:

17–As per sketch No. 1..... .....
18–As per sketch No. 2..... .....

4U90–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake cylinder lever, dressing and finishing over weld complete.

Forge.

Per first hole:

23–As per sketch No. 1..... .....
24–As per sketch No. 2..... .....

Per hole after first one:

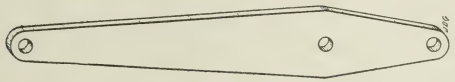
28–As per sketch No. 1..... .....
30–As per sketch No. 2..... .....

TENDER BRAKES
Truck Brake—Lever, Cylinder

Truck Brake

LEVER, DEAD OR LIVE

Tender Brake Dead or Live Lever



4U92-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake dead or live lever.

Power shears:

1–Per piece cut..... .....

4U92-9 Forged (at lever roller). **Rate**.....

Includes heating material after same has been delivered to lever roller, rolling truck brake dead or live lever to shape, and dressing ends complete.

Lever roller:

1–Per first lever..... .....
2–Per lever after first one..... .....

4U92-9 Forged and dressed. **Rate**.....

Includes getting material, forging, dressing and finishing complete, truck brake dead or live lever.

Steam hammer:

5–Per first lever..... .....
6–Per lever after first one..... .....

Forge:

9–Per first lever..... .....
10–Per lever after first one..... .....

4U92-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake dead or live lever by drawing out or upsetting same.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4U92-13 Made complete. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing truck brake dead or live lever complete.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

Truck Brake
LEVER, DEAD OR LIVE

4U92–14b Plugged cold—Holes. **Rate**.....

Includes making plug, heating and driving in hole in truck brake dead or live lever complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

4U92–18 Straightened. **Rate**.....

Includes straightening old truck brake dead or live lever when same has become bent or twisted.

Forge:

1–Per first lever..... .....
2–Per lever after first one..... .....

4U92–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake dead or live lever, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U92–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake dead or live lever, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U92–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake dead or live lever, dressing and finishing over weld complete.

Forge:

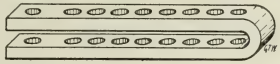
9–Per first hole..... .....
10–Per hole after first one..... .....

TENDER BRAKES
Truck Brake—Lever, Dead or Live

Truck Brake

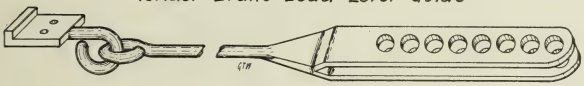
LEVER, DEAD—GUIDE

Tender Brake Dead Lever Guide



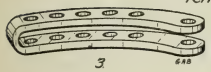
1

Tender Brake Dead Lever Guide



2

Tender Truck Brake Dead Lever Guides

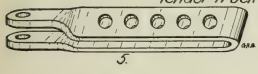


3

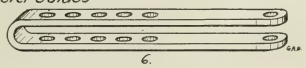


4

Tender Truck Brake Dead Lever Guides



5.



6.

Tender Brake Dead Lever Guide



7

4U94–2 Bend changed. **Rate**.....

Includes changing bend in truck brake dead lever guide.

Forge.

Per first bend changed:

1–As per sketch No. 1 ....
2–As per sketch No. 2 ....
3–As per sketch No. 3 ....
4–As per sketch No. 4 ....
5–As per sketch No. 5 ....
6–As per sketch No. 6 ....
7–As per sketch No. 7 ....

Truck Brake
LEVER, DEAD—GUIDE

Per bend changed after first one:
10–As per sketch No. 1 .....
11–As per sketch No. 2 .....
12–As per sketch No. 3 .....
13–As per sketch No. 4 .....
14–As per sketch No. 5 .....
15–As per sketch No. 6 .....
16–As per sketch No. 7 .....

4U94–2 Bent (bulldozer). **Rate** .....

Includes changing dies, bending truck brake dead lever guide at bulldozer after iron has been cut and delivered to bulldozer.

Bulldozer.
Per first guide:
20–As per sketch No. 1 .....
21–As per sketch No. 2 .....
22–As per sketch No. 3, first bend in end .....
23–As per sketch No. 3, first bend in radius .....
24–As per sketch No. 5, bend in end or doubled over .....
25–As per sketch No. 6 .....
26–As per sketch No. 7 .....

Per guide after first one:
30–As per sketch No. 1 .....
31–As per sketch No. 2 .....
32–As per sketch No. 3, bend after first one in end .....
33–As per sketch No. 3, bend after first one in radius .....
34–As per sketch No. 5, bend after first one in end or doubled over .....
35–As per sketch No. 6 .....
36–As per sketch No. 7 .....

4U94–4 Cut—Iron. **Rate** .....

Includes cutting iron at power shears for truck brake dead lever guide.

Power shears:
1–Per piece cut .....

4U94–6 Dressed and welded. **Rate** .....

Includes getting truck brake dead lever guide or guide end after same has been bent at bulldozer, doing necessary dressing and bending, welding end on body of guide, and finishing guide to shape complete.

Forge.
Per first guide:
1–As per sketch No. 1, welded, twisted and end welded on .....
5–As per sketch No. 5, twisted only .....

Per guide after first one:
7–As per sketch No. 1, welded, twisted and end welded on .....
9–As per sketch No. 5, twisted only .....

TENDER BRAKES
Truck Brake Dead Lever Guide

Truck Brake
LEVER, DEAD—GUIDE

4U94–12 Lengthened or shortened. Rate.....

Includes lengthening or shortening truck brake dead lever guide by drawing out or upsetting same.

Forge.

Per first guide:

1–As per sketch No. 1..... .....
2–As per sketch No. 4..... .....

Per guide after first one:

5–As per sketch No. 1..... .....
7–As per sketch No. 4..... .....

4U94–13 Made. Rate.....

Includes getting material, forging, bending, dressing, welding and finishing truck brake dead lever guide complete.

Forge.

Per first guide:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....
5–As per sketch No. 5..... .....
6–As per sketch No. 6..... .....
7–As per sketch No. 7..... .....

Per guide after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....
14–As per sketch No. 5..... .....
15–As per sketch No. 6..... .....
16–As per sketch No. 7..... .....

4U94–18 Straightened. Rate.....

Includes straightening old truck brake dead lever guide when same has become bent.

Forge:

1–Per first guide, all sketches..... .....
11–Per guide after first one, all sketches..... .....

Truck Brake

LEVER, DEAD—GUIDE

4U94–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake dead lever guide, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 4..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 4..... .....

4U94–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake dead lever guide, dressing and finishing over weld complete.

Forge:

11–Per first hole, all sketches..... .....
21–Per hole after first one, all sketches..... .....

4U94–21 Welded (new rod or straight end). **Rate**.....

Includes getting material, bending and finishing eye in rod end and welding end on truck brake dead lever guide and finishing complete.

Forge.

Per first end:

30–As per sketch No. 1, straight end..... .....
31–As per sketch No. 2, rod end..... .....

Per end after first one:

35–As per sketch No. 1, straight end..... .....
36–As per sketch No. 2, rod end..... .....

4U94–21 Welded and dressed. **Rate**.....

Includes welding together sides of truck brake dead lever guide after sides have been punched and rounded, dressing and finishing complete.

Steam hammer:

40–Per first guide..... .....
41–Per guide after first one..... .....

Forge:

45–Per first guide..... .....
46–Per guide after first one..... .....

TENDER BRAKES

Truck Brake Dead Lever Guide

Truck Brake

LEVER, DEAD—GUIDE EYE BOLT

4U98-13 Made at forge. **Rate**.....

Includes getting material, bending, dressing and finishing truck brake dead lever guide eye bolt complete.

Forge:

1–Per first eye bolt..... .....
2–Per eye bolt after first one..... .....

4U98-13 Made (at bulldozer or machine). **Rate**.....

Includes changing dies in bulldozer or forging machine, heating iron after same has been delivered to machine, and making truck brake dead lever guide eye bolt complete.

Bulldozer:

7–Per first eye bolt..... .....
8–Per eye bolt after first one..... .....

Machine:

11–Per first eye bolt..... .....
12–Per eye bolt after first one..... .....

Truck Brake

LEVER, DEAD—GUIDE LUG

4U102-13 Made and put in lever. **Rate**.....

Includes getting material, blocking out, forging, bending, dressing and finishing truck brake dead lever guide lug, putting lug in guide, twisting stem of guide, and finishing same complete.

Forge:

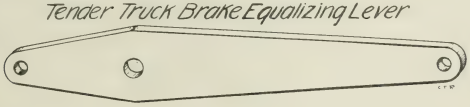
1–Per first guide..... .....
2–Per guide after first one..... .....

TENDER BRAKES

Truck Brake Dead Lever Guide Lug

Truck Brake

LEVER, EQUALIZING



4U116-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake equalizing lever.

Power shears:

1–Per piece cut..... .....

4U116-9 Forged (at lever roller). **Rate**.....

Includes heating material after same has been delivered to lever roller, rolling truck brake equalizing lever to shape, and dressing ends complete.

Lever roller:

1–Per first lever..... .....
5–Per lever after first one..... .....

4U116-9 Forged and dressed. **Rate**.....

Includes getting material, forging, dressing and finishing complete, truck brake equalizing lever.

Steam hammer:

9–Per first lever..... .....
13–Per lever after first one..... .....

Forge:

16–Per first lever..... .....
19–Per lever after first one..... .....

4U116-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake equalizing lever by drawing out or upsetting same.

Forge:

1–Per first lever..... .....
5–Per lever after first one..... .....

4U116-14b Plugged cold—Holes. **Rate**.....

Includes cold-plugging holes in truck brake equalizing lever complete.

1–Per first hole..... .....
5–Per hole after first one..... .....

Truck Brake
LEVER, EQUALIZING

4U116–18 Straightened. **Rate**.....

Includes straightening old truck brake equalizing lever when same has become bent or twisted.

Forge:

1–Per first lever..... .....
5–Per lever after first one..... .....

4U116–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake equalizing lever, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
5–Per place repaired after first one..... .....

4U116–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake equalizing lever, dressing and finishing over weld complete.

Forge:

9–Per first place repaired..... .....
13–Per place repaired after first one..... .....

4U116–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake equalizing lever, dressing and finishing over weld complete.

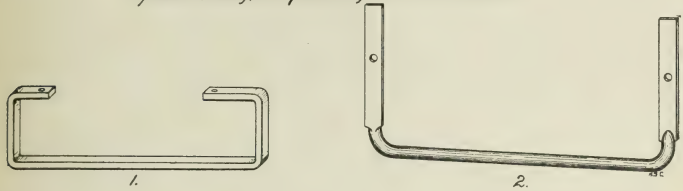
Forge:

16–Per first hole..... .....
19–Per hole after first one..... .....

Truck Brake

LEVER, EQUALIZING—BRACKET

Cylinder, Body, or Equalizing Lever Brackets



4U120–2 Bend changed. **Rate**.....

Includes changing bend in truck brake equalizing lever bracket.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U120–2 Bent (bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending truck brake equalizing lever bracket after iron has been cut and delivered to bulldozer.

Bulldozer:

5–Per first equalizing lever bracket..... .....
6–Per equalizing lever bracket after first one..... .....

4U120–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake equalizing lever bracket.

Power shears:

1–Per piece cut..... .....

4U120–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake equalizing lever bracket by drawing out or upsetting same.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

Truck Brake

LEVER, EQUALIZING—BRACKET

4U120–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing truck brake equalizing lever bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U120–18 Straightened. **Rate**.....

Includes straightening old truck brake equalizing lever bracket when same has become bent or twisted.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U120–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake equalizing lever bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U120–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake equalizing lever bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U120–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake equalizing lever bracket, dressing and finishing over weld complete.

Forge:

10–Per first hole..... .....
11–Per hole after first one..... .....

TENDER BRAKES

Truck Brake Equalizing Lever Bracket

Truck Brake
ROD, CONNECTING

Truck Brake Top or Bottom Connecting Rod



4U150–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake connecting rod by drawing out or upsetting same.

Forge:
1–Per first rod..... .....
2–Per rod after first one..... .....

4U150–13 Made (after parts are forged). **Rate**.....

Includes getting material for center of truck brake connecting rod after jaws have been made, doing necessary scarfing, welding jaws on center of rod, dressing and finishing rod to shape complete.

Steam hammer:
1–Per first rod..... .....
2–Per rod after first one..... .....

Forge:
5–Per first rod..... .....
6–Per rod after first one..... .....

4U150–18 Straightened. **Rate**.....

Includes straightening old truck brake connecting rod when same has become bent or twisted.

Forge:
1–Per first rod..... .....
2–Per rod after first one..... .....

4U150–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake connecting rod, dressing and finishing over weld complete.

Forge:
1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

Truck Brake

ROD, CONNECTING

4U150-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake connecting rod, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U150-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in truck brake connecting rod, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

TENDER BRAKES

Truck Brake Connecting Rod

Truck Brake

ROD, CONNECTING—END

4U154–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for jaw end of truck brake connecting rod.

Power shears:

1–Per piece cut..... .....

4U154–13 Made (at forge). **Rate**.....

Includes getting material, bending, welding, dressing and finishing jaw end of truck brake connecting rod complete.

Forge:

1–Per first end..... .....
2–Per rod after first one..... .....

4U154–15 Punched—Holes. **Rate**.....

Includes changing dies in power punch and punching complete, holes in pieces for truck brake connecting rod jaw.

Power punch:

1–Per first hole..... .....
2–Per hole after first one..... .....

4U154–19b. Trimmed. **Rate**.....

Includes changing dies in power punch and trimming complete, pieces for jaws of truck brake connecting rod after iron has been cut.

Power punch:

1–Per first piece..... .....
2–Per piece after first one..... .....

4U154–21 Welded (at forge after trimmed and punched). **Rate**.....

Includes getting pieces for truck brake connecting rod jaw after same have been trimmed and punched, welding pieces together and finishing jaw complete.

Forge:

1–Per first jaw..... .....
2–Per jaw after first one..... .....

4U154–21 Welded (jaw on body). **Rate**.....

Includes getting jaw end of truck brake connecting rod, doing necessary scarfing, welding jaw end on body of rod, dressing and finishing weld and rod to length complete.

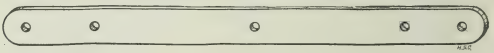
Forge:

5–Per first end..... .....
6–Per end after first one..... .....

Truck Brake

ROD, CONNECTING—BAR, SIDE

Tender Truck Brake Connecting Rod Side Bar



4U160–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truck brake connecting rod side bar.

Power shears:

1–Per piece cut..... .....

4U160–6 Dressed. **Rate**.....

Includes dressing and finishing complete, truck brake connecting rod side bar.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4U160–11 Ground. **Rate**.....

Includes grinding ends of truck brake connecting rod side bar after iron has been cut.

Emery wheel:

1–Per first bar..... .....
2–Per bar after first one..... .....

4U160–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truck brake connecting rod side bar by drawing out or upsetting same.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4U160–18 Straightened. **Rate**.....

Includes straightening old truck brake connecting rod side bar when same has become bent or twisted.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

TENDER BRAKES

Truck Brake Connecting Rod Side Bar

Truck Brake

ROD, CONNECTING—BAR, SIDE

4U160-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truck brake connecting rod side bar, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U160-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truck brake connecting rod side bar, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U160-21 Welded (holes plugged). **Rate**.....

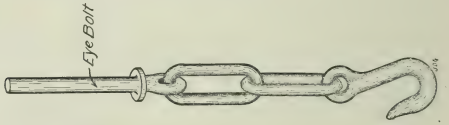
Includes making plug, welding same in hole in truck brake connecting rod side bar, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

Tender Frame

CHAIN, SAFETY—BOLT, EYE



4U200-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for safety chain eye bolt.

Power shears:

1–Per piece cut..... .....

4U200-6 Dressed. **Rate**.....

Includes cutting eye, dressing and finishing complete, safety chain eye bolt after same has been forged and stamped.

Forge:

1–Per first bolt..... .....
5–Per bolt after first one..... .....

4U200-9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, ready for dressing, safety chain eye bolt.

Steam hammer.

Per first bolt:

1–Bolt $1\frac{1}{8}$" or less in diameter..... .....
3–Bolt $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive..... .....

Per bolt after first one:

5–Bolt $1\frac{1}{8}$" or less in diameter..... .....
7–Bolt $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive..... .....

Forge.

Per first bolt:

9–Bolt $1\frac{1}{8}$" or less in diameter..... .....
11–Bolt $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive..... .....

Per bolt after first one:

13–Bolt $1\frac{1}{8}$" or less in diameter..... .....
15–Bolt $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive..... .....

Bradley hammer.

Per first bolt:

17–Bolt $1\frac{1}{8}$" or less in diameter..... .....

Per bolt after first one:

19–Bolt $1\frac{1}{8}$" or less in diameter..... .....

TENDER FRAME

Chain, Safety—Eye Bolt

Tender Frame

CHAIN, SAFETY—BOLT, EYE

4U200-9 Forged and dressed. Rate.....

Includes getting material, blocking out, forging, dressing and finishing complete, safety chain eye bolt.

Forge.

Per first bolt:

25–Bolt $1\frac{1}{8}$" or less in diameter..... .....
27–Bolt $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive..... .....

Per bolt after first one:

30–Bolt $1\frac{1}{8}$" or less in diameter..... .....
33–Bolt $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive..... .....

4U200-11 Ground and finished. Rate.....

Includes grinding and finishing at emery wheel safety chain eye bolt after same has been made at Bradley hammer and punched at power punch.

Emery wheel:

1–Per first eye bolt..... .....
2–Per eye bolt after first one..... .....

4U200-15 Punched (web out). Rate.....

Includes changing dies in power punch and punching out web in hole of safety chain eye bolt after bolt has been forged at Bradley hammer.

Power punch:

1–Per first eye bolt..... .....
2–Per eye bolt after first one..... .....

4U200-18 Straightened. Rate.....

Includes straightening old safety chain eye bolt when same has become bent or twisted.

Forge:

1–Per first bolt..... .....
5–Per bolt after first one..... .....

4U200-21 Welded (break). Rate.....

Includes doing necessary scarfing, welding break in safety chain eye bolt, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
5–Per place repaired after first one..... .....

Tender Frame

CHAIN, SAFETY—BOLT, EYE

4U200–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in safety chain eye bolt, dressing and finishing over weld complete.

Forge:

9–Per first place repaired..... .....

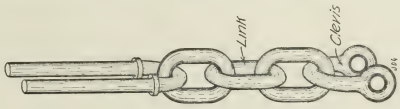
13–Per place repaired after first one..... .....

TENDER FRAME

Chain, Safety—Eye Bolt

Tender Frame

CHAIN, SAFETY—CLEVIS OR U BOLT



4U204–1 Balled up—Ends. **Rate**.....

Includes changing dies in forging machine and balling up ends of safety chain clevis or U bolt.

Machine:

1–Per first end..... .....
2–Per end after first one..... .....

4U204–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending safety chain clevis or U bolt after same has been cut and delivered to machine.

Bulldozer.

Per first clevis or U bolt:

1–As per sketch No. 2, clevis..... .....
2–As per sketch No. 2, U bolt..... .....
3–As per sketch No. 3, U bolt..... .....

Per clevis or U bolt after first one:

7–As per sketch No. 2, clevis..... .....
8–As per sketch No. 2, U bolt..... .....
9–As per sketch No. 3, U bolt..... .....

4U204–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for safety chain clevis or U bolt.

Power shears:

1–Per piece cut..... .....

4U204–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete at steam hammer, safety chain clevis or U bolt.

Steam hammer:

1–Per first clevis or U bolt..... .....
2–Per clevis or U bolt after first one..... .....

Tender Frame

CHAIN, SAFETY—CLEVIS OR U BOLT

4U204–13 Made. **Rate**.....

Includes getting material, bending, dressing, welding and finishing safety chain clevis or U bolt complete.

Forge.

Per first clevis or U bolt:

1–As per sketch No. 2, clevis..... .....
2–As per sketch No. 2, U bolt..... .....
3–As per sketch No. 3, U bolt..... .....

Per clevis or U bolt after first one:

7–As per sketch No. 2, clevis..... .....
8–As per sketch No. 2, U bolt..... .....
9–As per sketch No. 3, U bolt..... .....

4U204–18 Straightened. **Rate**.....

Includes straightening old safety chain U bolt or clevis when same has become bent.

Forge.

Per first clevis or U bolt:

1–As per sketch No. 2, clevis..... .....
2–As per sketch No. 2, U bolt..... .....
3–As per sketch No. 3, U bolt..... .....

Per clevis or U bolt after first one:

7–As per sketch No. 2, clevis..... .....
8–As per sketch No. 2, U bolt..... .....
9–As per sketch No. 3, U bolt..... .....

4U204–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in safety chain clevis or U bolt, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 2, clevis..... .....
2–As per sketch No. 2, U bolt..... .....
3–As per sketch No. 3, U bolt..... .....

Per place repaired after first one:

7–As per sketch No. 2, clevis..... .....
8–As per sketch No. 2, U bolt..... .....
9–As per sketch No. 3, U bolt..... .....

Tender Frame

CHAIN, SAFETY—CLEVIS OR U BOLT

4U204-21 Welded (crack). Rate.....

Includes making dutchman, welding same in crack in safety chain clevis or U bolt, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 2, clevis..... .....
13–As per sketch No. 2, U bolt..... .....
14–As per sketch No. 3, U bolt..... .....

Per place repaired after first one:

17–As per sketch No. 2, clevis..... .....
18–As per sketch No. 2, U bolt..... .....
19–As per sketch No. 3, U bolt..... .....

Tender Frame

CHAIN, SAFETY—HOOK



4U208–1 Balled up. **Rate**.....

Includes changing dies in forging machine and balling up iron for eye end of safety chain hook.

Machine.

1–Per first hook..... .....
5–Per hook after first one..... .....

4U208–2 Bent. **Rate**.....

Includes changing dies in bulldozer and bending safety chain hook after hook has been made in forging machine.

Bulldozer.

1–Per first hook..... .....
5–Per hook after first one..... .....

4U208–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for safety chain hook.

Power shears:

1–Per piece cut..... .....

4U208–6 Dressed. **Rate**.....

Includes dressing and finishing complete, hook for safety chain after hook has been forged and bent.

Forge.

1–Per first hook..... .....
5–Per hook after first one..... .....

4U208–9 Forged (eye end). **Rate**.....

Includes changing dies in machine and forging eye end of safety chain hook.

Machine.

1–Per first end..... .....
5–Per end after first one..... .....

Tender Frame
CHAIN, SAFETY—HOOK

4U208–9 Forged (pointed end). **Rate**.....

Includes changing dies in machine and forging pointed end of safety chain hook.

Machine.

7–Per first end..... .....
11–Per end after first one..... .....

4U208–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, bending, dressing and finishing complete, safety chain hook.

Forge.

15–Per first hook..... .....
18–Per hook after first one..... .....

4U208–18 Straightened. **Rate**.....

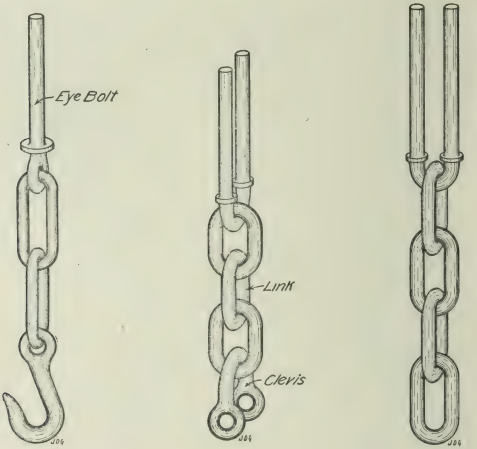
Includes straightening old safety chain hook when same has become bent.

Forge.

21–Per first hook..... .....
25–Per hook after first one..... .....

Tender Frame

CHAIN, SAFETY—LINK, CLOSED



4U212-2 Bent. **Rate**.....

Includes changing dies in bulldozer, and bending link for safety chain closed link at bulldozer after iron has been cut and delivered.

Bulldozer.

Per first link, all sketches:

1–Link $\frac{7}{8}''$ to $1\frac{1}{8}''$ inclusive ....
2–Link $1\frac{1}{4}''$ to $1\frac{1}{2}''$ inclusive ....

Per link after first one, all sketches:

5–Link $\frac{7}{8}''$ to $1\frac{1}{8}''$ inclusive ....
6–Link $1\frac{1}{4}''$ to $1\frac{1}{2}''$ inclusive ....

4U212-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for safety chain closed link.

Power shears.

Per piece cut:

1–As per sketch No. 1, top link ....
2–As per sketch No. 1, bottom link ....
3–As per sketch No. 2 ....

TENDER FRAME

Chain, Safety—Closed Link

Tender Frame
CHAIN, SAFETY—LINK, CLOSED

4U212-13 Made. Rate.....

Includes getting material, bending, welding in chain, dressing and finishing complete, safety chain closed link.

Forge.
Per first link, all classes:
1–Link $\frac{7}{8}$" to $1\frac{1}{8}$" inclusive.....
2–Link $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive.....
Per link after first one, all classes:
5–Link $\frac{7}{8}$" to $1\frac{1}{8}$" inclusive.....
6–Link $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive.....

4U212-18 Straightened. Rate.....

Includes straightening old safety chain closed link when same has become bent or twisted.

Forge.
Per first link:
1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
Per link after first one:
7–As per sketch No. 1.....
8–As per sketch No. 2.....
9–As per sketch No. 3.....

4U212-21 Welded (after bent at bulldozer). Rate.....

Includes getting safety chain closed link after same has been bent at bulldozer, doing necessary scarfing, welding link together, dressing and finishing complete.

Forge.
Per first link, all classes:
1–Link $\frac{7}{8}$" to $1\frac{1}{8}$" inclusive.....
3–Link $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive.....
Per link after first one, all classes:
7–Link $\frac{7}{8}$" to $1\frac{1}{8}$" inclusive.....
9–Link $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive.....

4U212-21 Welded (break). Rate.....

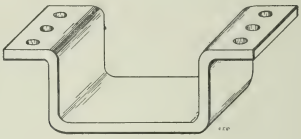
Includes doing necessary scarfing, welding break in safety chain closed link, dressing and finishing over weld complete.

Forge.
Per first link, all classes:
11–Link $\frac{7}{8}$" to $1\frac{1}{8}$" inclusive.....
13–Link $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive.....
Per link after first one, all classes:
17–Link $\frac{7}{8}$" to $1\frac{1}{8}$" inclusive.....
19–Link $1\frac{1}{4}$" to $1\frac{1}{2}$" inclusive.....

Tender Frame

COUPLER CARRIER

Tender Coupler Carrier



4U220–2 Bend changed. **Rate**.....

Includes changing bend in tender coupler carrier.

Forge.

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U220–2 Bent. **Rate**.....

Includes changing dies in machine and bending tender coupler carrier after iron has been cut and delivered to machine.

Bulldozer:

5–Per first carrier..... .....
6–Per carrier after first one..... .....

4U220–4 Cut—Iron. **Rate**.....

Includes cutting iron for tender coupler carrier at power shears.

Power shears:

1–Per piece cut..... .....

4U220–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender coupler carrier by drawing out or upsetting same.

Forge:

1–Per first carrier..... .....
2–Per carrier after first one..... .....

4U220–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, tender coupler carrier.

Forge:

1–Per first carrier..... .....
2–Per carrier after first one..... .....

TENDER FRAME

Coupler Carrier

Tender Frame

COUPLER CARRIER

4U220–18 Straightened. **Rate**.....

Includes straightening old tender coupler carrier when same has become bent or twisted.

Forge:

1–Per first carrier..... .....
2–Per carrier after first one..... .....

4U220–21 Welded (break). **Rate**.....

Includes welding break in tender coupler carrier, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U220–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender coupler carrier, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U220–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender coupler carrier, dressing and finishing over weld complete.

Forge:

9–Per first hole plugged..... .....
10–Per hole plugged after first one..... .....

Tender Frame

COUPLER—ROD, UNCOUPLING

Tender Coupler Uncoupling Rod



4U222-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening body, handles or lifting arm of coupler uncoupling rod, by drawing out or upsetting.

Forge:

1–Per first place lengthened or shortened..... .....
2–Per place lengthened or shortened after first one..... .....

4U222-13 Made. **Rate**.....

Includes getting material, bending, welding on lifting arm, dressing and finishing uncoupling rod to shape complete.

Forge:

1–Per first rod..... .....
2–Per rod after first one..... .....

4U222-18 Straightened. **Rate**.....

Includes straightening old coupler uncoupling rod when same has become bent.

Forge:

1–Per first place straightened..... .....
2–Per place straightened after first one..... .....

4U222-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in coupler uncoupling rod, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

TENDER FRAME

Coupler Uncoupling Rod

Tender Frame

COUPLER—ROD, UNCOUPLING

4U222-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in coupler uncoupling rod, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U222-21 Welded (new handle). **Rate**.....

Includes getting bar iron, welding same on rod of coupler uncoupling rod dressing and finishing to shape complete.

Forge:

8–Per first handle..... .....
9–Per handle after first one..... .....

4U222-21 Welded (new lifting arm). **Rate**.....

Includes getting material, forging arm, welding same on coupler uncoupling rod, dressing and finishing arm to shape complete.

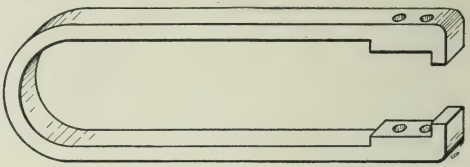
Forge:

11–Per first arm..... .....
12–Per arm after first one..... .....

Tender Frame

COUPLER YOKE

Tender Coupler Yoke



4U224–2 Bent. **Rate**.....

Includes changing dies in bulldozer, and bending tender coupler yoke after ends are formed and yoke has been delivered to bulldozer or forge.

Forge:
1–Per first yoke..... .....
6–Per yoke after first one..... .....

Bulldozer:
10–Per first yoke..... .....
15–Per yoke after first one:

4U224–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender coupler yoke.

Power shears:
1–Per piece cut..... .....

4U224–7 Fitted and applied (on coupler). **Rate**.....

Includes getting tender coupler yoke after same has been made ready for applying, applying yoke on coupler and putting in all rivets complete.

Forge:
1–Per first yoke..... .....
5–Per yoke after first one..... .....

4U224–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender coupler yoke by drawing out or upsetting same.

Forge:
1–Per first side of yoke..... .....
5–Per side of yoke after first one..... .....

TENDER FRAME

Coupler Yoke

Tender Frame
COUPLER YOKE

4U224-13 Made. Rate.....

Includes getting material, forging ends, bending, dressing and finishing tender coupler yoke to shape complete.

Forge:
1–Per first yoke.....
5–Per yoke after first one.....

4U224-15a Removed and reapplied (on coupler). Rate.....

Includes cutting off old rivets and removing old yoke from tender coupler, getting new yoke and riveting same on coupler.

Forge:
1–Per first yoke.....
5–Per yoke after first one.....

4U224-15a Removed (rivet). Rate.....

Includes cutting off old rivet in tender coupler yoke and applying new rivet complete.

Forge:
9–Per first rivet.....
14–Per rivet after first one.....

4U224-18 Straightened (yoke removed from coupler). Rate.....

Includes straightening old tender coupler yoke when same has become bent and when yoke is removed from coupler.

Forge:
1–Per first yoke.....
5–Per yoke after first one.....

4U224-18 Straightened (yoke on coupler). Rate.....

Includes straightening old tender coupler yoke when same has become bent and when yoke is riveted on coupler.

Forge:
9–Per first yoke.....
13–Per yoke after first one.....

4U224-21 Welded (break). Rate.....

Includes doing necessary scarfing, welding break in tender coupler yoke, dressing and finishing over weld complete.

Forge:
1–Per first place repaired.....
5–Per place repaired after first one.....

Tender Frame

COUPLER YOKE

4U224–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender coupler yoke, dressing and finishing over weld complete.

Forge:

10–Per first place repaired..... .....
15–Per place repaired after first one..... .....

4U224–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender coupler yoke, dressing and finishing over weld complete.

Forge:

20–Per first hole..... .....
24–Per hole after first one..... .....

4U224–21 Welded (new end) (after same has been forged). **Rate**.....

Includes getting new end for tender coupler yoke after end has been forged, doing necessary scarfing, welding end on body of yoke, dressing and finishing over weld complete.

Forge:

30–Per first end..... .....
34–Per end after first one..... .....

TENDER FRAME

Coupler Yoke

Tender Frame

COUPLER YOKE END

4U226–9 Forged. **Rate**.....

Includes getting material, blocking out and forging coupler yoke end at forge or changing dies in forging machine and forging end complete, after material has been delivered.

Forge:

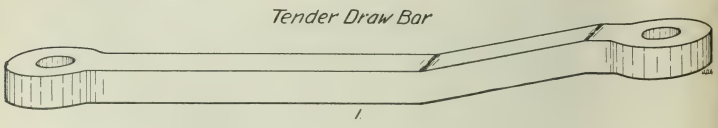
1–Per first end..... .....
2–Per end after first one..... .....

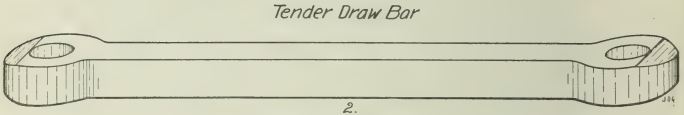
Machine:

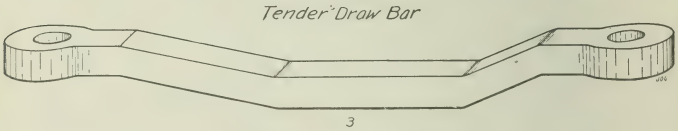
3–Per first end..... .....
4–Per end after first one..... .....

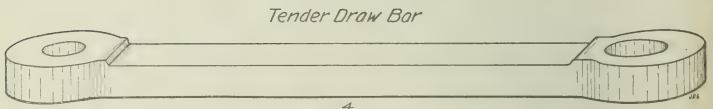
TENDER FRAME
Coupler Yoke End

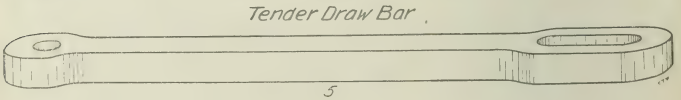
Tender Frame
DRAWBAR

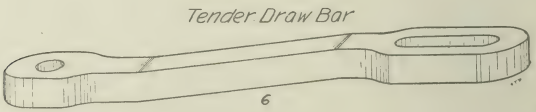












TENDER FRAME
Drawbar

Tender Frame
DRAWBAR

4U240–2 Bend or offset changed. Rate.....

Includes changing bend or offset in tender drawbar.

Steam hammer.

Per first drawbar:

1–As per sketch No. 1.....
2–As per sketch No. 3, both bends changed.....

Per drawbar after first one:

5–As per sketch No. 1.....
6–As per sketch No. 3, both bends changed.....

Forge.

Per first drawbar:

9–As per sketch No. 1.....
10–As per sketch No. 3, both bends changed.....

Per drawbar after first one:

13–As per sketch No. 1.....
14–As per sketch No. 3, both bends changed.....

4U240–3 Closed (holes). Rate.....

Includes heating end of tender drawbar, and closing holes complete.

Forge.

Per first hole:

1–Drawbar 24″ long or less.....
2–Drawbar over 24″ long to 36″ long incl.....
3–Drawbar over 36″ long to 48″ long incl.....
4–Drawbar over 48″ long to 60″ long incl.....
5–Drawbar over 60″ long.....

Per hole after first one:

7–Drawbar 24″ long or less.....
8–Drawbar over 24″ long to 36″ long incl.....
9–Drawbar over 36″ long to 48″ long incl.....
10–Drawbar over 48″ long to 60″ long incl.....
11–Drawbar over 60″ long.....

4U240–6 Dressed (ends). Rate.....

Includes dressing eyes and ends of tender drawbar complete, after drawbar has been forged.

Forge.

Per first end:

1–Drawbar 24″ long or less.....
2–Drawbar over 24″ long to 36″ long incl.....
3–Drawbar over 36″ long to 48″ long incl.....
4–Drawbar over 48″ long to 60″ long incl.....
5–Drawbar over 60″ long.....

Tender Frame

DRAWBAR

Per end after first one:

8–Drawbar 24″ long or less.....
9–Drawbar over 24″ long to 36″ long incl.....
10–Drawbar over 36″ long to 48″ long incl.....
11–Drawbar over 48″ long to 60″ long incl.....
12–Drawbar over 60″ long.....

4U240–9 **Forged.** Rate.....

Includes getting material, blocking out, forging and bending tender drawbar complete.

Steam hammer:

Straight drawbar 42″ long or less, made from scrap axle:

1–Per first drawbar.....
2–Per drawbar after first one.....

Straight drawbar 42″ long or less, made from piled iron; includes welding pile:

5–Per first drawbar.....
6–Per drawbar after first one.....

Straight drawbar over 42″ long, made from scrap axle:

10–Per first drawbar.....
11–Per drawbar after first one.....

Straight drawbar over 42″ long, made from pile iron; includes welding pile:

15–Per first drawbar.....
16–Per drawbar after first one.....

Drawbars with offset on one end, 42″ long or less, made from scrap axle:

20–Per first drawbar.....
21–Per drawbar after first one.....

Drawbars with offset on one end, 42″ long or less, made from piled iron, includes welding pile:

25–Per first drawbar.....
26–Per drawbar after first one.....

Drawbars with offset on both ends, 42″ long or less, made from scrap axle:

30–Per first drawbar.....
31–Per drawbar after first one.....

Drawbars with offset on both ends, 42″ long or less, made from piled iron, includes welding pile:

35–Per first drawbar.....
36–Per drawbar after first one.....

Drawbars with offset on both ends over 42″ long, made from scrap axle:

40–Per first drawbar.....
41–Per drawbar after first one.....

TENDER FRAME

Drawbar

Tender Frame
DRAWBAR

Drawbars with offset on both ends over 42″ long, made from pile iron, includes welding pile:
45–Per first drawbar.....
46–Per drawbar after first one.....

Forge:

Straight drawbar 42″ long or less, made from scrap axle:
50–Per first drawbar.....
51–Per drawbar after first one.....

Straight drawbar over 42″ long, made from scrap axle:
56–Per first drawbar.....
57–Per drawbar after first one.....

Drawbars with offset on one end, 42″ long or less, made from scrap axle:
60–Per first drawbar.....
61–Per drawbar after first one.....

Drawbars with offset on both ends, 42″ long or less, made from scrap axle:
65–Per first drawbar.....
66–Per drawbar after first one.....

Drawbars with offset on both ends over 42″ long, made from scrap axle:
70–Per first drawbar.....
71–Per drawbar after first one.....

4U240–12 Lengthened. Rate.....

Includes lengthening tender drawbar by drawing out same.

Steam hammer.

Per first drawbar:
1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....

Per drawbar after first one:
10–As per sketch No. 1.....
11–As per sketch No. 2.....
12–As per sketch No. 3.....
13–As per sketch No. 4.....

Forge.

Per first drawbar:
17–As per sketch No. 1.....
18–As per sketch No. 2.....
19–As per sketch No. 3.....
20–As per sketch No. 4.....

Tender Frame
DRAWBAR

Per drawbar after first one:
- 25–As per sketch No. 1 .....
- 26–As per sketch No. 2 .....
- 27–As per sketch No. 3 .....
- 28–As per sketch No. 4 .....

4U240–13 Made complete. **Rate**.....

Includes getting material, blocking out, forging, putting in offset, dressing and finishing tender drawbar complete.

Forge.

Straight drawbar 42″ long or less, made from scrap axle:
- 1–Per first drawbar .....
- 2–Per drawbar after first one .....

Straight drawbar over 42″ long, made from scrap axle:
- 5–Per first drawbar .....
- 6–Per drawbar after first one .....

Drawbars with offset on one end, 42″ long or less:
- 10–Per first drawbar .....
- 11–Per drawbar after first one .....

Drawbars with offset on both ends, 42″ long or less, made from scrap axle:
- 15–Per first drawbar .....
- 16–Per drawbar after first one .....

Drawbars with offset on both ends over 42″ long, made from scrap axle:
- 20–Per first drawbar .....
- 21–Per drawbar after first one .....

4U240–17 Shortened (by upsetting). **Rate**.....

Includes shortening tender drawbar by upsetting same complete.

Forge.

Per first $\frac{3}{4}$″ upset:
- 1–Drawbar 24″ long or less .....
- 2–Drawbar over 24″ long to 36″ long incl .....
- 3–Drawbar over 36″ long to 48″ long incl .....
- 4–Drawbar over 48″ long to 60″ long incl .....
- 5–Drawbar over 60″ long .....

Per each additional $\frac{1}{2}$″ upset:
- 8–Drawbar 24″ long or less .....
- 9–Drawbar over 24″ long to 36″ long incl .....
- 10–Drawbar over 36″ long to 48″ long incl .....
- 11–Drawbar over 48″ long to 60″ long incl .....
- 12–Drawbar over 60″ long .....

TENDER FRAME
Drawbar

Tender Frame
DRAWBAR

4U240–18 Straightened. **Rate**.....

Includes straightening old tender drawbar when same has become bent.

Steam hammer.

Per first drawbar:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....
4–As per sketch No. 4..... .....

Per drawbar after first one:

10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....
12–As per sketch No. 3..... .....
13–As per sketch No. 4..... .....

Forge.

Per first drawbar:

20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....
22–As per sketch No. 3..... .....
23–As per sketch No. 4..... .....

Per drawbar after first one:

30–As per sketch No. 1..... .....
31–As per sketch No. 2..... .....
32–As per sketch No. 3..... .....
33–As per sketch No. 4..... .....

4U240–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender drawbar, dressing and finishing over weld complete.

Forge.

Per first place repaired, all shapes of drawbars:

20–Drawbar 24″ long or less..... .....
21–Drawbar over 24″ long to 36″ long incl..... .....
22–Drawbar over 36″ long to 48″ long incl..... .....
23–Drawbar over 48″ long to 60″ long incl..... .....
24–Drawbar over 60″ long..... .....

Per place repaired after first one, all shapes of drawbars:

30–Drawbar 24″ long or less..... .....
31–Drawbar over 24″ long to 36″ long incl..... .....
32–Drawbar over 36″ long to 48″ long incl..... .....
33–Drawbar over 48″ long to 60″ long incl..... .....
34–Drawbar over 60″ long..... .....

Tender Frame

DRAWBAR

4U240-21 Welded (piece against end of drawbar). Rate.....

Includes getting material, doing necessary scarfing, welding piece against end of tender drawbar, closing hole, straightening and repairing end complete.

Forge.

Per first end:

41–Drawbar 24″ long or less.....
42–Drawbar over 24″ long to 36″ long incl.....
43–Drawbar over 36″ long to 48″ long incl.....
44–Drawbar over 48″ long to 60″ long incl.....
45–Drawbar over 60″ long and over.....

Per end after first one:

50–Drawbar 24″ long or less.....
51–Drawbar over 24″ long to 36″ long incl.....
52–Drawbar over 36″ long to 48″ long incl.....
53–Drawbar over 48″ long to 60″ long incl.....
54–Drawbar over 60″ long.....

4U240-21 Welded (piece around entire end of drawbar). Rate.....

Includes getting material, doing necessary scarfing, welding piece around entire end of tender drawbar to make bar 8½″ wide across end or over, closing hole, straightening and repairing end complete.

Forge.

Per first end:

60–Drawbar 48″ long to 60″ long incl.....
61–Drawbar over 60″ long.....

Per end after first one:

65–Drawbar 48″ long to 60″ long incl.....
66–Drawbar over 60″ long.....

4U240-21 Welded (dutchman in hole and hole closed). Rate.....

Includes making dutchman, welding same in crack around hole in tender drawbar, closing hole, dressing and finishing end complete.

Forge.

Per first end:

70–Drawbar 24″ long or less.....
71–Drawbar over 24″ long to 36″ long incl.....
72–Drawbar over 36″ long to 48″ long incl.....
73–Drawbar over 48″ long to 60″ long incl.....
74–Drawbar over 60″ long.....

Per end after first one:

80–Drawbar 24″ long or less.....
81–Drawbar over 24″ long to 36″ long incl.....
82–Drawbar over 36″ long to 48″ long incl.....
83–Drawbar over 48″ long to 60″ long incl.....
84–Drawbar over 60″ long.....

TENDER FRAME

Drawbar

Tender Frame

DRAWBAR PIN



4U244-4 Cut—Iron. Rate.....

Includes cutting iron at power shears for tender drawbar pin.

Power shears.

Per piece cut:

1–Iron 2″ to 2¼″ diameter..... .....

2–Iron 2¼″ to 3″ diameter..... .....

4U244-4 Cut—Iron (at forge). Rate.....

Includes cutting iron for tender drawbar pin at forge.

Forge:

5–Per first piece cut..... .....

6–Per piece cut after first one..... .....

4U244-6 Dressed—Ends pointed. Rate.....

Includes pointing ends of tender draw bar pin after pin has been forged. Includes changing dies when pins are pointed in forging machine.

Steam hammer:

1–Per first pin, all sizes..... .....

2–Per pin after first one, all sizes..... .....

Forge:

3–Per first pin, all sizes..... .....

4–Per pin after first one, all sizes..... .....

Machine.

Per first pin:

7–Pin less than 3″ diam..... .....

8–Pin 3″ diameter or over..... .....

Per pin after first one:

12–Pin 3″ less than 3″ diam..... .....

13–Pin 3″ diameter or over..... .....

Tender Frame

DRAWBAR PIN

4U244–10 Formed (heads). **Rate**.....

Includes forming complete head on tender drawbar pin when pin is made from bar iron, cutting iron not included.

Forge.

Per first pin:

1–Pin $2\frac{3}{4}$″ diameter or less.....

2–Pin over $2\frac{3}{4}$″ diameter.....

Per pin after first one:

5–Pin $2\frac{3}{4}$″ diameter or less.....

6–Pin over $2\frac{3}{4}$″ diameter.....

4U244–11a Headed (at forging machine). **Rate**.....

Includes changing dies in forging machine and heading complete, tender drawbar pin after iron has been cut and delivered to machine.

Machine.

Per first pin:

1–Iron 2″ diameter.....

2–Iron $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diameter incl.....

3–Iron $2\frac{3}{4}$″ to 3″ diameter incl.....

4–Iron over 3″ diameter.....

Per pin after first one:

9–Iron 2″ diameter.....

10–Iron $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diameter incl.....

11–Iron $2\frac{3}{4}$″ to 3″ diameter incl.....

12–Iron over 3″ diameter.....

4U244–13 Made complete. **Rate**.....

Includes getting scrap axles, forging, dressing and finishing complete, tender drawbar pin.

Steam hammer:

1–Per first pin.....

2–Per pin after first one.....

Forge.

Per first pin:

5–Pin less than 3″ diameter.....

6–Pin 3″ diameter or over.....

Per pin after first one:

9–Pin less than 3″ diameter.....

10–Pin 3″ diameter or over.....

TENDER FRAME

Drawbar Pin

Tender Frame

DRAWBAR PIN

4U244–18 Straightened. **Rate**.....

Includes straightening old tender drawbar pin when same has become bent.

Steam hammer:

1–Per first pin..... .....
2–Per pin after first one..... .....

Forge:

3–Per first pin..... .....
4–Per pin after first one..... .....

4U244–20a Upset. **Rate**.....

Includes upsetting tender drawbar pin and repairing same where worn.

Forge:

1–Per first pin, all sizes..... .....
2–Per pin after first one, all sizes..... .....

TENDER FRAME
Drawbar Pin

Tender Frame

DRAWBAR—YOKE FOLLOWER

Tender Couple Yoke Follower



4U246–4 Cut—Iron, and ground. **Rate**.....

Includes cutting iron at power shears and grinding sides and ends of same to form, coupler yoke follower complete.

Power shears and emery wheel:

1–Per follower..... .....

4U246–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing coupler yoke follower complete.

Steam hammer.

1–Per first follower..... .....
2–Per follower after first one..... .....

Forge:

3–Per first follower..... .....
4–Per follower after first one..... .....

4U246–18 Straightened. **Rate**.....

Includes straightening old coupler yoke follower when same has become bent or twisted.

Forge:

1–Per first follower..... .....
2–Per follower after first one..... .....

4U246–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in coupler yoke follower, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

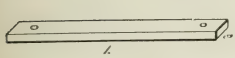
TENDER FRAME

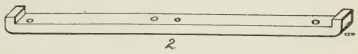
Drawbar Yoke Follower

Tender Frame

DRAWBAR YOKE FOLLOWER CARRIER

Tender Coupler Yoke Follower Carriers


1


2

4U248–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer, and bending end of coupler yoke follower carrier after iron has been cut and delivered at bulldozer.

Bulldozer.

Per first carrier:

1–As per sketch No. 2..... .....

Per carrier after first one:

5–As per sketch No. 2..... .....

4U248–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for coupler yoke follower carrier.

Power shears.

Per piece cut:

1–As per sketch No. 1..... .....
5–As per sketch No. 2..... .....

4U248–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening coupler yoke follower carrier by drawing out or upsetting same.

Forge.

Per first carrier:

1–As per sketch No. 1..... .....
5–As per sketch No. 2..... .....

Per carrier after first one:

9–As per sketch No. 1..... .....
14–As per sketch No. 2..... .....

4U248–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, coupler yoke follower carrier.

Forge.

Per first carrier:

1–As per sketch No. 2..... .....

Per carrier after first one:

5–As per sketch No. 2..... .....

Tender Frame

DRAWBAR YOKE FOLLOWER CARRIER

4U248-18 Straightened **Rate**.....

Includes straightening old coupler yoke follower carrier when same has become bent.

Forge.

Per first carrier:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per carrier after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U248-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in coupler yoke follower carrier, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U248-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in coupler yoke follower carrier, dressing and finishing over weld complete.

Forge.

Per first place repaired:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

Per place repaired after first one:

14–As per sketch No. 1..... .....
15–As per sketch No. 2..... .....

TENDER FRAME

Drawbar Yoke Follower Carrier

Tender Frame

DRAWBAR YOKE FOLLOWER CARRIER

4U248–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in coupler yoke follower carrier, dressing and finishing over weld complete.

Forge.

Per first hole:

20–As per sketch No. 1..... .....
21–As per sketch No. 2..... .....

Per hole after first one:

24–As per sketch No. 1..... .....
25–As per sketch No. 2..... .....

4U248–21 Welded (new lip). **Rate**.....

Includes welding necessary stock on end of coupler yoke follower carrier, dressing and finishing lip to shape complete.

Forge.

Per first lip:

28–As per sketch No. 2..... .....

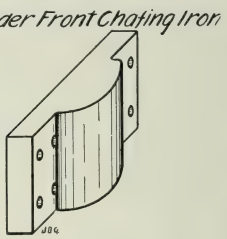
Per lip after first one:

30–As per sketch No. 2..... .....

TENDER FRAME
Drawbar Yoke Follower Carrier

Tender Frame

IRON—CHAFING, FRONT



4U260–13 Made. **Rate**.....

Includes getting material, blocking out, forging and finishing tender frame front chafing-iron complete.

Steam hammer:

1–Per first chafing-iron..... .....
2–Per chafing-iron after first one..... .....

Forge:

3–Per first chafing-iron..... .....
4–Per chafing-iron after first one..... .....

4U260–18 Straightened. **Rate**.....

Includes straightening old tender frame front chafing-iron when same has become bent.

Steam hammer:

1–Per first chafing-iron..... .....
2–Per chafing-iron after first one..... .....

Forge:

3–Per first chafing-iron..... .....
4–Per chafing-iron after first one..... .....

4U260–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender frame front chafing-iron, dressing and finishing over weld complete.

Forge:

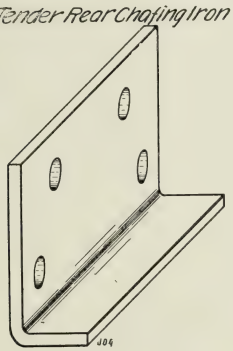
1–Per first hole plugged..... .....
2–Per hole plugged after first one..... .....

TENDER FRAME

Iron, Front Chafing

Tender Frame

IRON—CHAFING, REAR



4U264–2 Bent. **Rate**.....

Includes getting material and bending tender frame rear chafing-iron.

Steam hammer:

1–Per first chafing-iron..... .....
2–Per chafing-iron after first one..... .....

Forge:

3–Per first chafing-iron..... .....
4–Per chafing-iron after first one..... .....

4U264–13 Made. **Rate**.....

Includes getting material, forging, bending and finishing tender frame rear chafing-iron complete.

Steam hammer:

1–Per first chafing-iron..... .....
2–Per chafing-iron after first one..... .....

Forge:

3–Per first chafing-iron..... .....
4–Per chafing-iron after first one..... .....

Tender Frame

IRON—CHAFING, REAR

4U264–18 Straightened. **Rate**.....

Includes straightening old tender frame rear chafing-iron when same has become bent.

Steam hammer:

1–Per first chafing-iron..... .....
2–Per chafing-iron after first one..... .....

Forge:

3–Per first chafing-iron..... .....
4–Per chafing-iron after first one..... .....

4U264–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender frame rear chafing-iron, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U264–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender frame rear chafing-iron, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

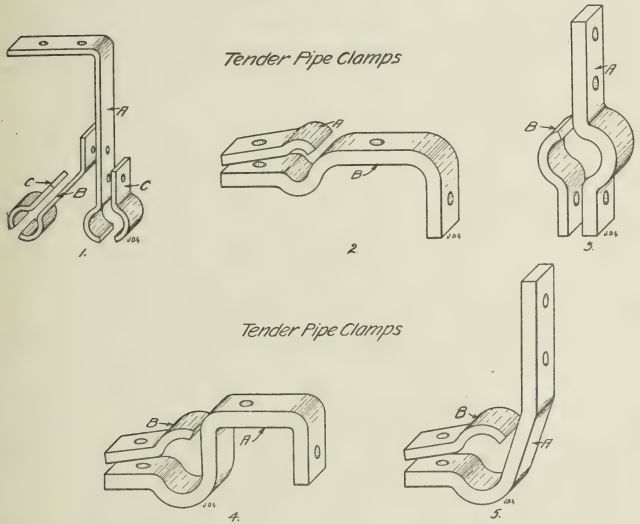
4U264–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender frame rear chafing-iron, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

Tender Frame
PIPE, STEAM—CLAMP



4U280–2 Bend changed. Rate.....

Includes changing bend in steampipe clamp.

Forge.

Per first clamp:

1–As per sketch No. 1, clamp A..... .....
2–As per sketch No. 1, clamp B..... .....
3–As per sketch No. 1, clamp C..... .....
4–As per sketch No. 2, clamp A..... .....
5–As per sketch No. 2, clamp B..... .....
6–As per sketch No. 3, clamp A..... .....
7–As per sketch No. 3, clamp B..... .....
8–As per sketch No. 4, clamp A..... .....
9–As per sketch No. 4, clamp B..... .....
10–As per sketch No. 5, clamp A..... .....
11–As per sketch No. 5, clamp B..... .....

Tender Frame

PIPE, STEAM—CLAMP

Per clamp after first one:

15–As per sketch No. 1, clamp A..... .....
16–As per sketch No. 1, clamp B..... .....
17–As per sketch No. 1, clamp C..... .....
18–As per sketch No. 2, clamp A..... .....
19–As per sketch No. 2, clamp B..... .....
20–As per sketch No. 3, clamp A..... .....
21–As per sketch No. 3, clamp B..... .....
22–As per sketch No. 4, clamp A..... .....
23–As per sketch No. 4, clamp B..... .....
24–As per sketch No. 5, clamp A..... .....
25–As per sketch No. 5, clamp B..... .....

4U280–2 Bent (bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending steampipe clamp.

Bulldozer:

30–Per first clamp, all sketches, Clamp A, B, or C..... .....

Per clamp after first one:

45–As per sketch No. 1, clamp A..... .....
46–As per sketch No. 1, clamp B..... .....
47–As per sketch No. 1, clamp C..... .....
48–As per sketch No. 2, clamp A..... .....
49–As per sketch No. 2, clamp B..... .....
50–As per sketch No. 3, clamp A..... .....
51–As per sketch No. 3, clamp B..... .....
52–As per sketch No. 4, clamp A..... .....
53–As per sketch No. 4, clamp B..... .....
54–As per sketch No. 5, clamp A..... .....
55–As per sketch No. 5, clamp B..... .....

4U280–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for steampipe clamp.

Power shears:

1–Per piece cut..... .....

4U280–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening steampipe clamp by drawing out or upsetting same.

Forge.

Per first clamp:

1–As per sketch No. 1, clamp A..... .....
2–As per sketch No. 1, clamp B..... .....
3–As per sketch No. 1, clamp C..... .....
4–As per sketch No. 2, clamp A..... .....
5–As per sketch No. 2, clamp B..... .....

(Continued on page 539.)

Tender Frame
PIPE, STEAM—CLAMP

(Continued from page 538.)

6–As per sketch No. 3, clamp A.....
7–As per sketch No. 3, clamp B.....
8–As per sketch No. 4, clamp A.....
9–As per sketch No. 4, clamp B.....
10–As per sketch No. 5, clamp A.....
11–As per sketch No. 5, clamp B.....

Per clamp after first one:

15–As per sketch No. 1, clamp A.....
16–As per sketch No. 1, clamp B.....
17–As per sketch No. 1, clamp C.....
18–As per sketch No. 2, clamp A.....
19–As per sketch No. 2, clamp B.....
20–As per sketch No. 3, clamp A.....
21–As per sketch No. 3, clamp B.....
22–As per sketch No. 4, clamp A.....
23–As per sketch No. 4, clamp B.....
24–As per sketch No. 5, clamp A.....
25–As per sketch No. 5, clamp B.....

4U280–13 Made complete (at forge). **Rate**.....

Includes getting material, bending, dressing and finishing complete, steam-pipe clamp.

Forge.

Per first clamp:

1–As per sketch No. 1, clamp A.....
2–As per sketch No. 1, clamp B.....
3–As per sketch No. 1, clamp C.....
4–As per sketch No. 2, clamp A.....
5–As per sketch No. 2, clamp B.....
6–As per sketch No. 3, clamp A.....
7–As per sketch No. 3, clamp B.....
8–As per sketch No. 4, clamp A.....
9–As per sketch No. 4, clamp B.....
10–As per sketch No. 5, clamp A.....
11–As per sketch No. 5, clamp B.....

Per clamp after first one:

15–As per sketch No. 1, clamp A.....
16–As per sketch No. 1, clamp B.....
17–As per sketch No. 1, clamp C.....
18–As per sketch No. 2, clamp A.....
19–As per sketch No. 2, clamp B.....
20–As per sketch No. 3, clamp A.....
21–As per sketch No. 3, clamp B.....
22–As per sketch No. 4, clamp A.....
23–As per sketch No. 4, clamp B.....
24–As per sketch No. 5, clamp A.....
25–As per sketch No. 5, clamp B.....

Tender Frame

PIPE, STEAM—CLAMP

4U280–18 Straightened. **Rate**.....

Includes straightening old steampipe clamp when same has become bent or twisted.

Forge.

Per first clamp:

1–As per sketch No. 1, clamp A..... .....
2–As per sketch No. 1, clamp B..... .....
3–As per sketch No. 1, clamp C..... .....
4–As per sketch No. 2, clamp A..... .....
5–As per sketch No. 2, clamp B..... .....
6–As per sketch No. 3, clamp A..... .....
7–As per sketch No. 3, clamp B..... .....
8–As per sketch No. 4, clamp A..... .....
9–As per sketch No. 4, clamp B..... .....
10–As per sketch No. 5, clamp A..... .....
11–As per sketch No. 5, clamp B..... .....

Per clamp after first one:

15–As per sketch No. 1, clamp A..... .....
16–As per sketch No. 1, clamp B..... .....
17–As per sketch No. 1, clamp C..... .....
18–As per sketch No. 2, clamp A..... .....
19–As per sketch No. 2, clamp B..... .....
20–As per sketch No. 3, clamp A..... .....
21–As per sketch No. 3, clamp B..... .....
22–As per sketch No. 4, clamp A..... .....
23–As per sketch No. 4, clamp B..... .....
24–As per sketch No. 5, clamp A..... .....
25–As per sketch No. 5, clamp B..... .....

4U280–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in steampipe clamp, dressing and finishing over weld complete.

Forge:

1–Per first hole, all sketches, clamp A, B, or C..... .....
15–Per hole after first one, all sketches, clamp A, B, or C... .....

Tender Frame
ROD, DRAFT

4U290–18 Straightened. Rate.....

Includes straightening old tender frame draft rod when same has become bent or twisted.

Steam hammer:
1–Per first rod.....
2–Per rod after first one.....

Forge:
3–Per first rod.....
4–Per rod after first one.....

4U290–20a Upset ends. Rate.....

Includes changing dies in forging machine and upsetting complete ends of tender frame draft rods.

Machine:
1–Per first end.....
2–Per end after first one.....

4U290–21 Welded (break). Rate.....

Includes doing necessary scarfing, welding break in tender frame draft rod, dressing and finishing over weld complete.

Steam hammer:
1–Per first place repaired.....
2–Per place repaired after first one.....

Forge:
3–Per first place repaired.....
4–Per place repaired after first one.....

4U290–21 Welded (ends on body). Rate.....

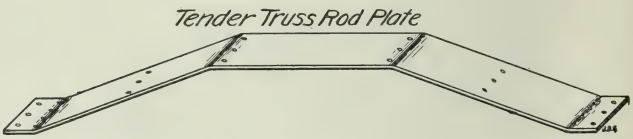
Includes getting ends for tender frame draft rod, doing necessary scarfing, welding end on rod, dressing and finishing over weld complete.

Steam hammer.
Per first end:
7–Body of rod $1\frac{3}{8}''$ or less.....
8–Body of rod $1\frac{1}{2}''$ to $2''$.....
Per end after first one:
11–Body of rod $1\frac{3}{8}''$ or less.....
12–Body of rod $1\frac{1}{2}''$ to $2''$.....

Forge.
Per first end:
16–Body of rod $1\frac{1}{4}''$ diameter or less.....
17–Body of rod $1\frac{3}{8}''$ to $1\frac{1}{2}''$.....
18–Body of rod $1\frac{5}{8}''$ to $2''$.....
Per end after first one:
21–Body of rod $1\frac{1}{4}''$ diameter or less.....
22–Body of rod $1\frac{3}{8}''$ to $1\frac{1}{2}''$.....
23–Body of rod $1\frac{5}{8}''$ to $2''$.....

Tender Frame

ROD, TRUSS—PLATE



4U296–2 Bend changed. **Rate**.....

Includes changing bend in truss rod plate.

Forge:

1–Per first bend..... .....
2–Per bend after first one..... .....

4U296–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truss rod plate.

Power shears:

1–Per piece cut..... .....

4U296–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening truss rod plate by drawing out or upsetting same.

Forge:

1–Per first plate..... .....
2–Per plate after first one..... .....

4U296–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing truss rod plate complete.

Steam hammer:

1–Per first plate..... .....
2–Per plate after first one..... .....

Forge:

3–Per first plate..... .....
4–Per plate after first one..... .....

4U296–18 Straightened. **Rate**.....

Includes straightening old truss rod plate when same has become bent.

Forge:

1–Per first plate..... .....
2–Per plate after first one..... .....

TENDER FRAME

Rod, Truss—Plate

Tender Frame

ROD, TRUSS—PLATE

4U296–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in truss rod plate, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U296–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in truss rod plate, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U296–21 Welded (holes plugged). **Rate**.....

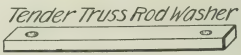
Includes making plug, welding same in hole in truss rod plate, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

Tender Frame

ROD, TRUSS—WASHER



4U300–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for truss rod washer.

Power shears:

1–Per piece cut..... .....

4U300–15 Punched. **Rate**.....

Includes changing dies and punching iron at power punch for truss rod washer.

Power punch:

1–Per first hole..... .....
2–Per hole after first one..... .....

4U300–18 Straightened. **Rate**.....

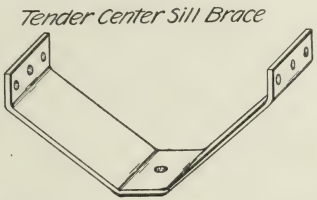
Includes straightening old truss rod washer when same has become bent.

Forge:

1–Per first washer..... .....
2–Per washer after first one..... .....

Tender Frame

SILL, CENTER—BRACE



4U310–2 Bend changed. **Rate**.....

Includes changing bend in tender frame center sill brace.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U310–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending tender frame center sill brace after same has been cut and delivered to bulldozer.

Bulldozer:

5–Per first brace..... .....
6–Per brace after first one..... .....

4U310–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender frame center sill brace.

Power shears:

1–Per piece cut..... .....

4U310–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender frame center sill brace by drawing out or upsetting same.

Forge:

1–Per first place lengthened or shortened..... .....
2–Per place lengthened or shortened after first one..... .....

4U310–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing center sill brace complete.

Forge:

1–Per first brace..... .....
2–Per brace after first one..... .....

Tender Frame

SILL, CENTER—BRACE

4U310-18 Straightened. **Rate**.....

Includes straightening old tender frame center sill brace when same has become bent.

Forge:

1–Per first brace..... .....
2–Per brace after first one..... .....

4U310-21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender frame center sill brace, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U310-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender frame center sill brace, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U310-21 Welded (holes plugged). **Rate**.....

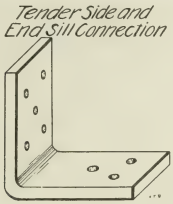
Includes making plug, welding same in hole in tender frame center sill brace, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

Tender Frame

SILL, SIDE AND END—CONNECTION



4U318-2 Bend changed. Rate.....

Includes changing bend in side and end sill connection.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U318-2 Bent (at bulldozer). Rate.....

Includes changing dies in bulldozer and bending side and end sill connection after same has been cut and delivered at bulldozer.

Bulldozer:

5–Per first connection..... .....
6–Per connection after first one..... .....

4U318-4 Cut—Iron. Rate.....

Includes cutting iron at power shears for side and end sill connection.

Power shears:

1–Per piece cut..... .....

4U318-12 Lengthened or shortened. Rate.....

Includes lengthening or shortening side and end sill connection by drawing out or upsetting same.

Forge:

1–Per first place lengthened or shortened..... .....
2–Per place lengthened or shortened after first one..... .....

4U318-13 Made. Rate.....

Includes getting material, bending, dressing and finishing complete side and end sill connection.

Forge:

1–Per first connection..... .....
2–Per connection after first one..... .....

Tender Frame

SILL, SIDE AND END—CONNECTION

4U318–18 Straightened. **Rate**.....

Includes straightening old side and end sill connection when same has become bent.

Forge:

1–Per first connection..... .....
2–Per connection after first one..... .....

4U318–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in side and end sill connection, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U318–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in side and end sill connection, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U318–21 Welded (holes plugged). **Rate**.....

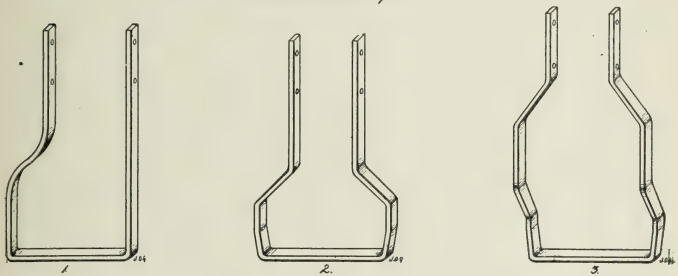
Includes making plug, welding same in hole in side and end sill connection, dressing and finishing over weld complete.

Forge:

9–Per first hole..... .....
10–Per hole after first one..... .....

Tender Frame
STEP, REAR

Tender Rear Steps



4U324–2 Bend changed. **Rate**.....

Includes changing bend in tender rear step.

Forge:

1–Per first bend, all sketches..... .....
5–Per bend after first one, all sketches..... .....

4U324–2 Bent (at bulldozer). **Rate**.....

Includes changing dies and bending tender rear step at bulldozer after iron has been cut and delivered.

Bulldozer:

9–Per first step, all sketches..... .....
14–Per step after first one, all sketches..... .....

4U324–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender rear step.

Power shears:

1–Per piece cut..... .....

4U324–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender rear step by drawing out or upsetting same.

Forge:

1–Per first step, all sketches..... .....
7–Per step after first one, all sketches..... .....

Tender Frame

STEP, REAR

4U324–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, tender rear step.

Forge.

Per first step:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per step after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4U324–18 Straightened. **Rate**.....

Includes straightening old tender rear step when same has become bent or twisted.

Forge.

Per first step:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....

Per step after first one:

7–As per sketch No. 1 .....
8–As per sketch No. 2 .....
9–As per sketch No. 3 .....

4U324–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender rear step, dressing and finishing over weld complete.

Forge:

1–Per first place repaired, all sketches .....
7–Per place repaired after first one, all sketches .....

4U324–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender rear step, dressing and finishing over weld complete.

Forge:

12–Per first place repaired, all sketches .....
17–Per place repaired after first one, all sketches .....

TENDER FRAME

Step, Rear

Tender Frame

STEP, REAR

4U324–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender rear step, dressing and finishing over weld complete.

Forge:

23–Per first hole, all sketches..... .....

29–Per hole after first one, all sketches..... .....

Tender Frame

TRANSOM (OR CHANNEL BAR)

4U334–18 Straightened. **Rate**.....

Includes straightening old tender frame transom or channel bar when same has become bent or twisted.

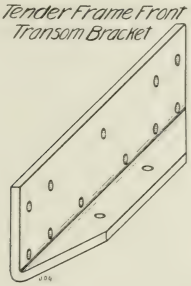
Steam hammer:

1–Per first transom..... .....

2–Per transom after first one..... .....

Tender Frame

TRANSOM—BRACKET, FRONT



4U338–18 Straightened. **Rate**.....

Includes straightening old tender frame front transom bracket when same has become bent or twisted.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

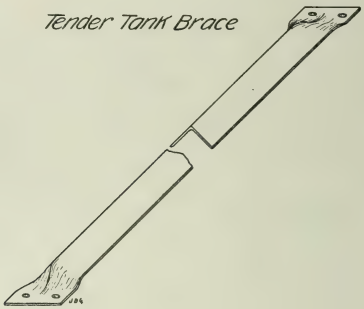
4U338–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender frame front transom bracket, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Tender Tank
BRACE



4U380–2 Bend changed. **Rate**.....

Includes changing bend in tender tank brace.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U380–4 Cut—Iron. **Rate**.....

Includes cutting iron for tender tank brace.

Power shears:

1–Per piece cut..... .....

4U380–13 Made. **Rate**.....

Includes getting material for tender tank brace, bending, dressing and finishing ends complete.

Forge:

1–Per first brace..... .....
2–Per brace after first one..... .....

4U380–18 Straightened. **Rate**.....

Includes straightening old tender tank brace when same has become bent or twisted.

Forge:

1–Per first brace..... .....
2–Per brace after first one..... .....

TENDER TANK

Brace

Tender Tank
BRACE

4U380–21 Welded (holes plugged). **Rate**.....

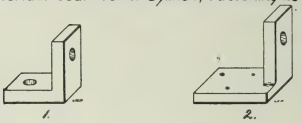
Includes making plug, welding same in hole in tender tank brace, dressing and finishing over weld complete.

Forge:
1–Per first hole..... .....
2–Per hole after first one..... .....

Tank

COAL PUSHER CYLINDER—LUG, FASTENING

Tender Coal Pusher Cylinder Fastening Lugs



4U388–6 Dressed. **Rate**.....

Includes dressing and finishing complete, coal pusher cylinder fastening lug after same has been bent or forged.

Forge.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lug after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U388–18 Straightened. **Rate**.....

Includes straightening old coal pusher cylinder fastening lug when same has become bent.

Forge.

Per first lug:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per lug after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U388–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in coal pusher cylinder fastening lug, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

TENDER TANK

Coal Pusher Cylinder—Fastening Lug

Tender Tank

COAL PUSHER CYLINDER—LUG, FASTENING

4U388-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in coal pusher cylinder fastening lug, dressing and finishing over weld complete.

Forge.

Per first hole:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

Per hole after first one:

13–As per sketch No. 1..... .....
14–As per sketch No. 2..... .....

TENDER TANK
Coal Pusher Cylinder—Fastening Lug

Tender Tank

COAL PUSHER CYLINDER, PISTON ROD



4U398–9 Forged (boss end). **Rate**.....

Includes getting material, blocking out and forging complete, boss end of coal pusher cylinder piston rod, ready for welding on body of rod.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

3–Per first end..... .....
4–Per end after first one..... .....

4U398–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening coal pusher cylinder piston rod by drawing out or upsetting same.

Forge:

1–Per first piston rod..... .....
2–Per piston rod after first one..... .....

4U398–13 Made. **Rate**.....

Includes getting material, getting boss end when same has been forged, welding, dressing and finishing complete, coal pusher cylinder piston rod.

Forge:

1–Per first piston rod..... .....
2–Per piston rod after first one..... .....

4U398–18 Straightened. **Rate**.....

Includes straightening old coal pusher cylinder piston rod when same has become bent.

Forge:

1–Per first piston rod..... .....
2–Per piston rod after first one..... .....

Tender Tank

COAL PUSHER CYLINDER, PISTON ROD

4U398–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in coal pusher cylinder piston rod, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U398–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in coal pusher cylinder piston rod, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U398–21 Welded (new end). **Rate**.....

Includes getting new boss end after same has been forged, doing necessary scarfing, welding end on body of coal pusher cylinder piston rod, dressing and finishing over weld complete.

Forge:

9–Per first end..... .....
10–Per end after first one..... .....

4U398–21 Welded (new piston end). **Rate**.....

Includes cutting off old end of coal pusher piston rod, welding on necessary stock for new piston end, dressing and finishing complete.

Forge:

13–Per first end..... .....
14–Per end after first one..... .....

Tender Tank

COAL PUSHER CYLINDER, PISTON ROD—END, BOSS

4U400-13 Made (at forging machine). **Rate**.....

Includes changing dies in forging machine and forging complete, boss end of coal pusher cylinder piston rod complete after material has been delivered to machine.

Forging machine:

1–Per first end..... .....

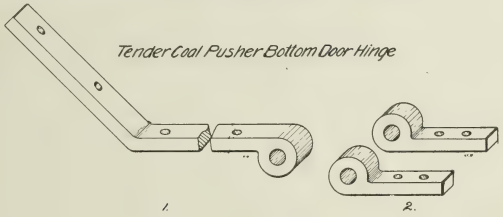
2–Per end after first one..... .....

TENDER TANK

Coal Pusher Cylinder—Piston Rod Boss End

Tender Tank

COAL PUSHER—DOOR, BOTTOM—HINGE



4U410–2 Bend changed. **Rate**.....

Includes changing bend in coal pusher bottom door hinge.

Forge.

Per first bend changed:

1–As per sketch No. 1..... .....

Per bend changed after first one:

5–As per sketch No. 1..... .....

4U410–6 Dressed. **Rate**.....

Includes bending, dressing ends and finishing complete, coal pusher bottom door hinge after same has been forged.

Forge.

Per first hinge:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hinge after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U410–9 Forged. **Rate**.....

Includes getting material, blocking out and forging coal pusher bottom door hinge complete, ready for dressing.

Steam hammer.

Per first hinge:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hinge after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

Tender Tank

COAL PUSHER—DOOR, BOTTOM—HINGE

Forge.
Per first hinge:
9–As per sketch No. 1 .....
10–As per sketch No. 2 .....
Per hinge after first one:
13–As per sketch No. 1 .....
14–As per sketch No. 2 .....

4U410–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, bending, dressing and finishing coal pusher bottom door hinge complete.

Forge.
Per first hinge:
17–As per sketch No. 1 .....
18–As per sketch No. 2 .....
Per hinge after first one:
21–As per sketch No. 1 .....
23–As per sketch No. 2 .....

4U410–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening coal pusher bottom door hinge by drawing out or upsetting same.

Forge.
Per first hinge:
1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
Per hinge after first one:
5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4U410–18 Straightened. **Rate**.....

Includes straightening old coal pusher bottom door hinge when same has become bent.

Forge.
Per first hinge:
1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
Per hinge after first one:
5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

TENDER TANK

Coal Pusher—Bottom Door Hinge

Tender Tank
COAL PUSHER—DOOR, BUTTON—HINGE

4U410–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in coal pusher bottom door hinge, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U410–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in coal pusher bottom door hinge, dressing and finishing over weld complete.

Forge.

Per first place repaired:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4U410–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in coal pusher bottom door hinge, dressing and finishing over weld complete.

Forge.

Per first hole:

21–As per sketch No. 1, hole in boss end..... .....
22–As per sketch No. 1, hole in body of hinge..... .....
23–As per sketch No. 2, hole in boss end..... .....
24–As per sketch No. 2, hole in body of hinge..... .....

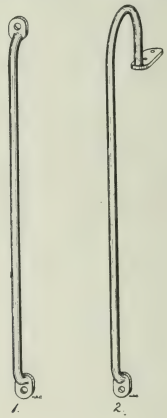
Per hole after first one:

30–As per sketch No. 1, hole in boss end..... .....
31–As per sketch No. 1, hole in body of hinge..... .....
32–As per sketch No. 2, hole in boss end..... .....
33–As per sketch No. 2, hole in body of hinge..... .....

TENDER TANK
Coal Pusher—Bottom Door Hinge

Tender Tank
HAND HOLD

Tender Tank Hand Holds



4U450–1 Balled up. **Rate**.....

Includes changing dies in machine and balling up ends of tender tank hand hold ready for forging.

Machine:

1–Per first end..... .....
2–Per end after first one..... .....

4U450–4 Cut—Iron. **Rate**.....

Includes cutting iron for tender tank hand holds at power shears.

Power shears:

1–Per piece cut..... .....

4U450–6 Dressed. **Rate**.....

Includes welding top end of hand hold on body of hand hold as shown in sketch No. 2, or doing necessary bending and dressing of hand holds, as per sketches Nos. 1 and 2, and finishing same complete.

Forge.

Per first hand hold:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

TENDER TANK
Hand Hold

Tender Tank
HAND HOLD

Per hand hold after first one:
3–As per sketch No. 1 .....
4–As per sketch No. 2 .....

4U450–9 Forged (ends). **Rate**.....

Includes changing dies in machine and forging ends of tender tank hand holds complete, after iron has been delivered to machine with ends balled up.

Machine.
Per first hand hold:
1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
Per hand hold after first one:
5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

4U450–9 Forged (end at forge). **Rate**.....

Includes getting material, blocking out and forging complete, end of tender tank hand hold.

Forge.
Per first end:
9–As per sketch No. 1 .....
10–As per sketch No. 2, top end .....
11–As per sketch No. 2, bottom end .....
Per end after first one:
15–As per sketch No. 1 .....
16–As per sketch No. 2, top end .....
17–As per sketch No. 2, bottom end .....

4U450–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender tank hand hold by drawing out or upsetting same.

Forge.
Per first hand hold:
1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
Per hand hold after first one:
5–As per sketch No. 1 .....
6–As per sketch No. 2 .....

TENDER TANK
Hand Hold

Tender Tank
HAND HOLD

4U450–13 Made complete (at forge). **Rate**.....

Includes getting material, forging ends, doing necessary welding, dressing and finishing tender tank hand hold complete.

Forge.

Per first hand hold:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hand hold after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U450–18 Straightened. **Rate**.....

Includes straightening old tender tank hand hold when same has become bent or twisted.

Forge.

Per first hand hold:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per hand hold after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U450–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender tank hand hold, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U450–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender tank hand hold, dressing and finishing over weld complete.

Forge.

Per first place repaired:

9–As per sketch No. 1..... .....
10–As per sketch No. 2..... .....

TENDER TANK
Hand Hold

Tender Tank
HAND HOLD

Per place repaired after first one:

13–As per sketch No. 1 ..... ----------
14–As per sketch No. 2 ..... ----------

4U450–21 Welded (new end). **Rate** ----------

Includes getting new end of tender tank hand hold after end has been forged, welding same on body of hand hold, dressing and finishing complete.

Forge.

Per first end:

16–As per sketch No. 1 ..... ----------
17–As per sketch No. 2, top end ..... ----------
18–As per sketch No. 2, bottom end ..... ----------

Per end after first one:

22–As per sketch No. 1 ..... ----------
23–As per sketch No. 2, top end ..... ----------
24–As per sketch No. 2, bottom end ..... ----------

TENDER TANK
Hand Hold

Tender Tank

HEADLIGHT BRACKET



4U460–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in machine and bending complete tender tank headlight bracket after iron for same has been cut and delivered to machine.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U460–2 Bend changed. **Rate**.....

Includes changing bend in headlight bracket.

Forge:

5–Per first bend changed..... .....
6–Per bend changed after first one..... .....

4U460–4 Cut—Iron. **Rate**.....

Includes cutting iron for tender tank headlight bracket at power shears.

Power shears:

1–Per piece cut..... .....

4U460–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender tank headlight bracket by drawing out or upsetting same.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U460–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing tender tank headlight bracket complete.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

TENDER TANK

Headlight Bracket

Tender Tank

HEADLIGHT BRACKET

4U460–18 Straightened. **Rate**.....

Includes straightening old tender tank headlight bracket when same has become bent or twisted.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U460–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender tank headlight bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U460–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender tank headlight bracket, dressing and finishing over weld complete.

Forge:

5–Per first place repaired..... .....
6–Per place repaired after first one..... .....

4U460–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender tank headlight bracket, dressing and finishing over weld complete.

Forge:

9–Per first hole plugged..... .....
10–Per hole plugged after first one..... .....

Tender Tank
LADDER

Tender Tank Ladders



4U470-2 Bend changed. **Rate**.....

Includes changing bend in tender tank ladder.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U470-12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender tank ladder by drawing out or upsetting same.

Forge:

1–Per first ladder..... .....
2–Per ladder after first one..... .....

TENDER TANK
Ladder

Tender Tank
LADDER

4U470–13 Made complete (at forge). Rate.....

Includes getting material, dressing and finishing complete, tender tank ladder.

Forge.

Per first side of ladder:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per side of ladder after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U470–18 Straightened. Rate.....

Includes straightening old tender tank ladder when same has become bent.

Forge.

Per first ladder:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per ladder after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U470–21 Welded (break). Rate.....

Includes doing necessary scarfing, welding break in tender tank ladder, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4U470–21 Welded (holes plugged). Rate.....

Includes making plug, welding same in hole in tender tank ladder, dressing and finishing over weld complete.

Forge.

Per first hole:

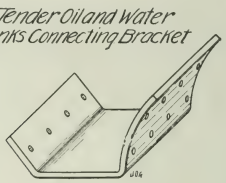
10–As per sketch No. 1..... .....
11–As per sketch No. 2..... .....

Per hole after first one:

14–As per sketch No. 1..... .....
15–As per sketch No. 2..... .....

Tender Tank

TANK, OIL AND WATER—BRACKET, CONNECTING



4U490–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in machine and bending complete, tender oil and water tank connecting bracket, after iron for same has been cut and delivered to machine.

Bulldozer:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U490–2 Bend changed. **Rate**.....

Includes changing bend in tender oil and water tank connecting bracket.

Forge:

5–Per first bend changed..... .....
6–Per bend changed after first one..... .....

4U490–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, tender oil and water tank connecting bracket.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

4U490–18 Straightened. **Rate**.....

Includes straightening old tender oil and water tank connecting bracket when same has become bent or twisted.

Forge:

1–Per first bracket..... .....
2–Per bracket after first one..... .....

TENDER TANK

Tank, Oil and Water, Connecting Bracket

Tender Tank

TANK, OIL AND WATER—BRACKET, CONNECTING

4U490-21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender oil and water connecting bracket, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U490-21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender oil and water tank connecting bracket, dressing and finishing over weld complete.

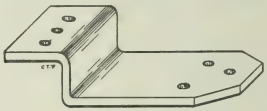
Forge:

5–Per first hole plugged..... .....
6–Per hole plugged after first one..... .....

Tender Tank

TANK, OIL—ANCHOR

Tender Oil Tank Anchor



4U496–2 Bend changed. **Rate**.....

Includes changing bend in tender oil tank anchor.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U496–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending tender oil tank anchor after iron has been cut and delivered to bulldozer.

Bulldozer:

5–Per first anchor..... .....
6–Per anchor after first one..... .....

4U496–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender oil tank anchor.

Power shears:

1–Per piece cut..... .....

4U496–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender oil tank anchor by drawing out or upsetting same.

Forge:

1–Per first anchor..... .....
2–Per anchor after first one..... .....

4U496–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing complete, tender oil tank anchor.

Forge:

1–Per first anchor..... .....
2–Per anchor after first one..... .....

TENDER TANK

Tank, Oil—Anchor

Tender Tank

TANK, OIL—ANCHOR

4U496–18 Straightened. **Rate**.....

Includes straightening old tender oil tank anchor when same has become bent or twisted.

Forge:

1–Per first anchor..... .....
2–Per anchor after first one..... .....

4U496–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender oil tank anchor, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U496–21 Welded (holes plugged). **Rate**.....

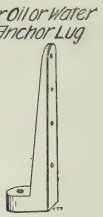
Includes making plug, welding same in hole in tender oil tank anchor, dressing and finishing over weld complete.

Forge:

5–Per first hole..... .....
6–Per hole after first one..... .....

Tender Tank

TANK, OIL—ANCHOR LUG



4U500-9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing complete, tender oil tank anchor lug.

Steam hammer:

1–Per first lug..... .....
2–Per lug after first one..... .....

Forge:

5–Per first lug:
6–Per lug after first one..... .....

4U500-18 Straightened. **Rate**.....

Includes straightening old tender oil tank anchor lug when same has become bent or twisted.

Forge:

1–Per first lug..... .....
2–Per lug after first one..... .....

4U500-21 Welded (holes plugged). **Rate**.....

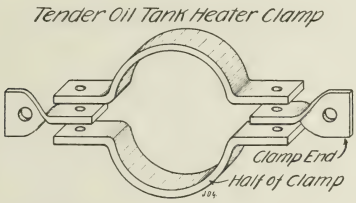
Includes making plug, welding same in hole in tender oil tank anchor lug, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Tender Tank

TANK, OIL—HEATER CLAMP



4U510-2 Bent (at bulldozer). **Rate**.....

Includes changing dies in machine and bending complete, tender oil tank heater clamp after iron for same has been cut and delivered to machine.

Bulldozer:

1–Per first half of clamp..... .....
2–Per half of clamp after first half..... .....

4U510-2 Bend changed. **Rate**.....

Includes changing bend in tender oil tank heater clamp.

Forge:

5–Per first bend changed..... .....
6–Per bend changed after first one..... .....

4U510-4 Cut—Iron. **Rate**.....

Includes cutting iron for tender oil tank heater clamp at power shears.

Power shears:

1–Per piece cut..... .....

4U510-9 Made. **Rate**.....

Includes getting material, bending, dressing and finishing tender oil tank heater clamp complete.

Forge:

1–Per first half of clamp..... .....
2–Per half of clamp after first half..... .....

Tender Tank

TANK, OIL—HEATER CLAMP

4U510–18 Straightened. **Rate**.....

Includes straightening old tender oil tank heater clamp when same has become bent or twisted.

Forge:

1–Per first half of clamp..... .....
2–Per half of clamp after first half..... .....

4U510–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender oil tank heater clamp, dressing and finishing over weld complete.

Forge:

1–Per first hole plugged..... .....
2–Per hole plugged after first one..... .....

Tender Tank

TANK, OIL—HEATER CLAMP END

4U514–2 Bend changed. **Rate**.....

Includes changing bend in tender oil tank heater clamp end.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U514–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender oil tank heater clamp end.

Power shears:

1–Per first piece cut..... .....

4U514–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing tender oil tank heater clamp end complete.

Forge:

1–Per first end..... .....
2–Per end after first one ....

4U514–18 Straightened. **Rate**.....

Includes straightening old tender oil tank heater clamp end when same has become bent or twisted.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4U514–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender oil tank heater clamp end, dressing and finishing over weld complete.

Forge:

1–Per first hole..... .....
2–Per hole after first one..... .....

Tender Tank

TANK, WATER—ANCHOR LUG

4U520–13 Made complete. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing to shape, tender water tank anchor lug complete.

Steam hammer:

1–Per first lug..... .....
2–Per lug after first one..... .....

Forge:

3–Per first lug..... .....
4–Per lug after first one..... .....

4U520–18 Straightened. **Rate**.....

Includes straightening old tender water tank anchor lug when same has become bent or twisted.

Forge:

1–Per first lug..... .....
2–Per lug after first one..... .....

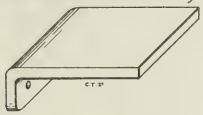
TENDER TANK

Tank, Water—Anchor Lug

Tender Tank

TANK, WATER—LEG STEP

Tender Tank Water Leg Step



4U530–2 Bend changed. **Rate**.....

Includes changing bend in tender water tank leg step.

Forge:

1–Per first bend changed..... .....
2–Per bend changed after first one..... .....

4U530–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending tender water tank leg step after iron has been cut and delivered to bulldozer.

Bulldozer:

5–Per first step..... .....
6–Per step after first one..... .....

4U530–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender water tank leg step.

Power shears:

1–Per piece cut..... .....

4U530–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender water tank leg step by drawing out or upsetting same.

Forge:

1–Per first step..... .....
2–Per step after first one..... .....

4U530–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing tender water tank leg step complete.

Forge:

1–Per first step..... .....
2–Per step after first one..... .....

Tender Tank

TANK, WATER—LEG STEP

4U530–18 Straightened. **Rate**.....

Includes straightening old tender water tank leg step when same has become bent or twisted.

Forge:

1–Per first step..... .....
2–Per step after first one..... .....

4U530–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender water tank leg step, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U530–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender water tank leg step, dressing and finishing over weld complete.

Forge:

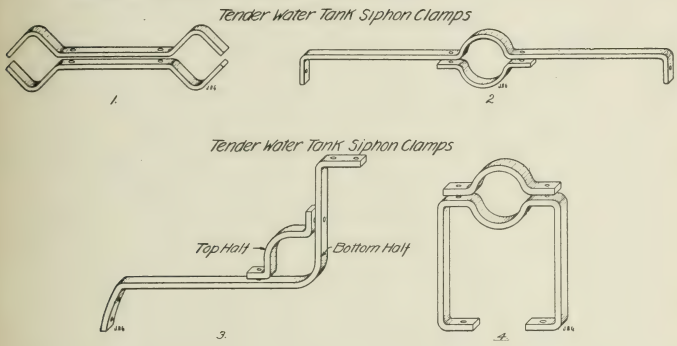
5–Per first hole..... .....
6–Per hole after first one..... .....

TENDER TANK

Tank, Water—Leg Step

Tender Tank

TANK, WATER—SIPHON CLAMP



4U540–2 Bend changed. **Rate**.....

Includes changing bend in water tank siphon clamp.

Forge.

Per first clamp:

1–As per sketch No. 1, either half..... .....
2–As per sketch No. 2, top half..... .....
3–As per sketch No. 2, bottom half..... .....
4–As per sketch No. 3, top half..... .....
5–As per sketch No. 3, bottom half..... .....
6–As per sketch No. 4, top half..... .....
7–As per sketch No. 4, bottom half..... .....

Per clamp after first one:

11–As per sketch No. 1, either half..... .....
12–As per sketch No. 2, top half..... .....
13–As per sketch No. 2, bottom half..... .....
14–As per sketch No. 3, top half..... .....
15–As per sketch No. 3, bottom half..... .....
16–As per sketch No. 4, top half..... .....
17–As per sketch No. 4, bottom half..... .....

Tender Tank

TANK, WATER—SIPHON CLAMP

4U540–2 Bent (bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending water tank siphon clamp complete, after iron has been cut and delivered to bulldozer.

Bulldozer:

20–Per first clamp, all sketches, either half..... .....

Per clamp after first one:

30–As per sketch No. 1, either half..... .....
31–As per sketch No. 2, top half..... .....
32–As per sketch No. 2, bottom half..... .....
33–As per sketch No. 3, top half..... .....
34–As per sketch No. 3, bottom half..... .....
35–As per sketch No. 4, top half..... .....

4U540–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for water tank siphon clamp.

Power shears:

1–Per piece cut..... .....

4U540–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening water tank siphon clamp by drawing out or upsetting same.

Forge.

Per first clamp:

1–As per sketch No. 1, either half..... .....
2–As per sketch No. 2, top half..... .....
3–As per sketch No. 2, bottom half..... .....
4–As per sketch No. 3, top half..... .....
5–As per sketch No. 3, bottom half..... .....
6–As per sketch No. 4, top half..... .....
7–As per sketch No. 4, bottom half..... .....

Per clamp after first one:

11–As per sketch No. 1, either half..... .....
12–As per sketch No. 2, top half..... .....
13–As per sketch No. 2, bottom half..... .....
14–As per sketch No. 3, top half..... .....
15–As per sketch No. 3, bottom half..... .....
16–As per sketch No. 4, top half..... .....
17–As per sketch No. 4, bottom half..... .....

TENDER TANK

Tank, Water—Siphon Clamp

Tender Tank

TANK, WATER—SIPHON CLAMP

4U540–13 Made complete (at forge). **Rate**.....

Includes getting material, bending, dressing and finishing complete, water tank siphon clamp.

Forge. .....

Per first clamp:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, top half..... .....
3–As per sketch No. 2, bottom half..... .....
4–As per sketch No. 3, top half..... .....
5–As per sketch No. 3, bottom half..... .....
6–As per sketch No. 4, top half..... .....
7–As per sketch No. 4, bottom half..... .....

Per clamp after first one:

11–As per sketch No. 1..... .....
12–As per sketch No. 2, top half..... .....
13–As per sketch No. 2, bottom half..... .....
14–As per sketch No. 3, top half..... .....
15–As per sketch No. 3, bottom half..... .....
16–As per sketch No. 4, top half..... .....
17–As per sketch No. 4, bottom half..... .....

4U540–18 Straightened. **Rate**.....

Includes straightening old water tank siphon clamp when same has become bent or twisted.

Forge.

Per first clamp:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, top half..... .....
3–As per sketch No. 2, bottom half..... .....
4–As per sketch No. 3, top half..... .....
5–As per sketch No. 3, bottom half..... .....
6–As per sketch No. 4, top half..... .....
7–As per sketch No. 4, bottom half..... .....

Per clamp after first one:

11–As per sketch No. 1..... .....
12–As per sketch No. 2, top half..... .....
13–As per sketch No. 2, bottom half..... .....
14–As per sketch No. 3, top half..... .....
15–As per sketch No. 3, bottom half..... .....
16–As per sketch No. 4, top half..... .....
17–As per sketch No. 4, bottom half..... .....

Tender Tank

TANK, WATER—SIPHON CLAMP

4U540–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in water tank siphon clamp, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, top half..... .....
3–As per sketch No. 3, bottom half..... .....
4–As per sketch No. 4, bottom half..... .....

Per clamp after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2, top half..... .....
9–As per sketch No. 3, bottom half..... .....
10–As per sketch No. 4, bottom half..... .....

4U540–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in water tank siphon clamp, dressing and finishing over weld complete.

Forge.

Per first place repaired:

21–As per sketch No. 3, bottom half..... .....
23–As per sketch No. 4, bottom half..... .....

Per place repaired after first one:

26–As per sketch No. 3, bottom half..... .....
29–As per sketch No. 4, bottom half..... .....

4U540–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in water tank siphon clamp, dressing and finishing over weld complete.

Forge.

Per first hole:

35–As per sketch No. 1..... .....
36–As per sketch No. 2, top half..... .....
37–As per sketch No. 2, bottom half..... .....
38–As per sketch No. 3, top half..... .....
39–As per sketch No. 3, bottom half..... .....
40–As per sketch No. 4, top half..... .....
41–As per sketch No. 4, bottom half..... .....

Per hole after first one:

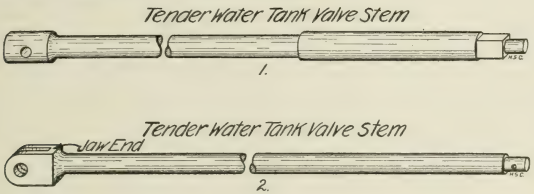
46–As per sketch No. 1..... .....
47–As per sketch No. 2, top half..... .....
48–As per sketch No. 2, bottom half..... .....
49–As per sketch No. 3, top half..... .....
50–As per sketch No. 3, bottom half..... .....
51–As per sketch No. 4, top half..... .....
52–As per sketch No. 4, bottom half..... .....

TENDER TANK

Tank, Water—Siphon Clamp

Tender Tank

TANK, WATER—VALVE STEM



4U550–6 Dressed. **Rate**.....

Includes cutting jaw, dressing and finishing water tank valve stem complete.

Forge.

Per first stem:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, when jaw is cut..... .....
3–As per sketch No. 2, when jaw is not cut..... .....

Per stem after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2, when jaw is cut..... .....
9–As per sketch No. 2, when jaw is not cut..... .....

4U550–9 Forged. **Rate**.....

Includes getting material, blocking out and forging ends of water tank valve stem complete, ready for dressing.

Steam hammer.

Per first stem:

1–As per sketch No. 1..... .....
2–As per sketch No. 2, when jaw is cut..... .....
3–As per sketch No. 2, when jaw is not cut..... .....

Per stem after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2, when jaw is cut..... .....
9–As per sketch No. 2, when jaw is not cut..... .....

Forge.

Per first stem:

11–As per sketch No. 1..... .....
12–As per sketch No. 2, when jaw is cut..... .....
13–As per sketch No. 2, when jaw is not cut..... .....

Per stem after first one:

17–As per sketch No. 1..... .....
18–As per sketch No. 2, when jaw is cut..... .....
19–As per sketch No. 2, when jaw is not cut..... .....

Tender Tank

TANK, WATER—VALVE STEM

4U550–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing water tank valve stem complete.

Forge.

Per first stem:

23–As per sketch No. 1..... .....
24–As per sketch No. 2, when jaw is cut..... .....
25–As per sketch No. 2, when jaw is not cut..... .....

Per stem after first one:

28–As per sketch No. 1..... .....
29–As per sketch No. 2, when jaw is cut..... .....
30–As per sketch No. 2, when jaw is not cut..... .....

4U550–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening water tank valve stem by drawing out or upsetting same.

Forge.

Per first stem:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per stem after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....

4U550–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in water tank valve stem, dressing and finishing over weld complete.

Forge.

Per first place repaired:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per place repaired after first one:

7–As per sketch No. 1..... .....
8–As per sketch No. 2..... .....

TENDER TANK

Tank, Water—Valve Stem

Tender Tank

TANK, WATER—VALVE STEM

4U550–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in water tank valve stem, dressing and finishing over weld complete.

Forge.

Per first place repaired:

12–As per sketch No. 1..... .....
13–As per sketch No. 2..... .....

Per place repaired after first one:

15–As per sketch No. 1..... .....
16–As per sketch No. 2..... .....

4U550–21 Welded (new end). **Rate**.....

Includes getting new jaw end after same has been forged, doing necessary scarfing, welding jaw end on body of water tank valve stem, dressing and finishing over weld complete.

Forge.

Per first jaw end:

21–As per sketch No. 1..... .....
22–As per sketch No. 2..... .....

Per jaw end after first one:

24–As per sketch No. 1..... .....
25–As per sketch No. 2..... .....

4U550–21 Welded (new boss, square or round end). **Rate**.....

Includes welding required stock on old water tank valve stem, dressing and finishing complete boss end, square end or round end.

Forge.

Per first end:

28–As per sketch No. 1, boss end..... .....
29–As per sketch No. 1, square end..... .....
30–As per sketch No. 2, round end..... .....

Per end after first one:

35–As per sketch No. 1, boss end..... .....
36–As per sketch No. 1, square end..... .....
37–As per sketch No. 2, round end..... .....

Tender Tank

TANK, WATER—VALVE STEM—END, JAW

4U554–2 Bent. **Rate**.....

Includes changing dies in bulldozer and bending jaw end of water tank valve stem after iron has been cut and delivered to bulldozer.

Bulldozer.

Per first end:

1–As per sketch No. 2..... .....

Per end after first one:

5–As per sketch No. 2..... .....

4U554–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for water tank valve stem jaw end.

Power shears:

1–Per piece cut..... .....

4U554–6 Dressed. **Rate**.....

Includes dressing and finishing complete, water tank valve stem jaw end after same has been forged.

Forge.

Per first end:

1–As per sketch No. 2, when jaw is cut..... .....
3–As per sketch No. 2, when jaw is not cut..... .....

Per end after first one:

5–As per sketch No. 2, when jaw is cut..... .....
7–As per sketch No. 2, when jaw is not cut..... .....

4U554–9 Forged. **Rate**.....

Includes getting material, blocking out and forging complete, water tank valve stem jaw end.

Steam hammer.

Per first end:

1–As per sketch No. 2, when jaw is cut..... .....
3–As per sketch No. 2, when jaw is not cut..... .....

Per end after first one:

5–As per sketch No. 2, when jaw is cut..... .....
7–As per sketch No. 2, when jaw is not cut..... .....

Forge.

Per first end:

9–As per sketch No. 2, when jaw is cut..... .....
11–As per sketch No. 2, when jaw is not cut..... .....

Per end after first one:

13–As per sketch No. 2, when jaw is cut..... .....
15–As per sketch No. 2, when jaw is not cut..... .....

TENDER TANK

Tank, Water—Valve Stem Jaw End

Tender Tank

TANK, WATER—VALVE STEM—END, JAW

4U554–9 Forged (at forging machine). **Rate**.....

Includes changing dies in forging machine and forging complete, water tank valve stem jaw end after iron has been cut, bent, punched and delivered at machine.

Forging machine.

Per first jaw end:

17–As per sketch No. 2..... .....

Per jaw end after first one:

19–As per sketch No. 2..... .....

Tender Truck
AXLE



4U600–9 Forged. **Rate**.....

Includes forging down tender truck axle to reduce same in size.

Steam hammer:

1–Per first axle..... .....
2–Per axle after first one..... .....

4U600–12 Lengthened. **Rate**.....

Includes forging out and lengthening tender truck axle to size, complete.

Steam hammer:

1–Per first axle..... .....
2–Per axle after first one..... .....

4U600–13 Made (from slabs). **Rate**.....

Includes getting slabs, forging, dressing and finishing tender truck axle.

Steam hammer.

Per first axle:

1–Axle 5 in. diameter or less..... .....
2–Axle more than 5 in. to 6 in. diameter..... .....

Per axle after first one:

3–Axle 5 in. diameter or less..... .....
4–Axle more than 5 in. to 6 in. diameter..... .....

TENDER TRUCK
Axle

Tender Truck
AXLE SLAB

4U608–13 Made (from scrap iron). **Rate**.....

Includes getting scrap iron after same has been piled, taking heat and forging pile to form slab for tender truck axle slab.

Steam hammer:

1–Per first slab..... .....
2–Per slab after first one..... .....

4U608–13 Made (single slab) (from old axle). **Rate**.....

Includes forging from old car axle single slab for tender truck axle.

Steam hammer:

7–Per first slab..... .....
8–Per slab after first one..... .....

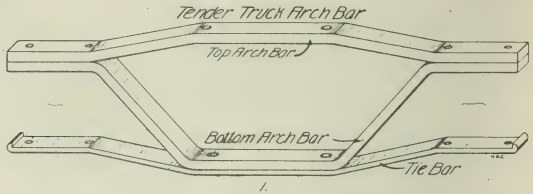
4U608–13 Made (double slabs) (from old axles). **Rate**.....

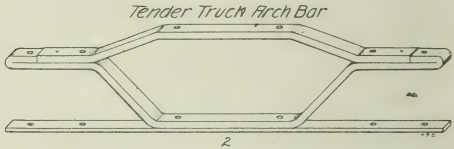
Includes forging from old car axles double slab for tender truck axle.

Steam hammer:

11–Per first slab..... .....
12–Per slab after first one..... .....

Tender Truck
BAR, ARCH





4U612–2 Bent (at bulldozer). **Rate**.....

Includes heating and bending top or bottom arch bars at bulldozer after lugs have been formed on ends.

Bulldozer.
Bottom arch bar:
Arch bar 1″x3½″:
1–Per first bar..... .....
2–Per arch bar after first one..... .....
Arch bar 1⅛″x4″:
3–Per first bar..... .....
4–Per bar after first one..... .....
Arch bar 1¼″x4½″:
5–Per first bar..... .....
6–Per bar after first one:
Arch bar 1¾″x5″ or 2″x5″:
7–Per first bar..... .....
8–Per bar after first one..... .....
Top arch bar.
Arch bar 1⅛″x3½″:
13–Per first bar..... .....
14–Per bar after first one..... .....

TENDER TRUCK
Bar, Arch

Tender Truck
BAR, ARCH

Arch bar 1¼"x4":
15–Per first bar. .....
16–Per bar after first one. .....

Arch bar 1⅜"x4½":
17–Per first bar. .....
18–Per bar after first one. .....

Arch bar 1¾"x5" or 2"x5":
19–Per first bar. .....
20–Per bar after first one. .....

4U612–7 Fitted (top arch bar). **Rate** .....

Includes cutting off top arch bar and fitting to bottom arch bar after arch bars have been bent at bulldozer.

Arch bar 1½"x4½" or less:
1–Per first bar. .....
2–Per bar after first one. .....

Arch bar over 1½"x4½":
3–Per first bar. .....
4–Per bar after first one. .....

4U612–10 Formed (lugs on ends) (at machine). **Rate** .....

Includes changing dies in forging machine heating, bottom arch bar and forming lugs on both ends, as per sketch No. 2.

Arch bar 1"x3½":
1–Per first bar. .....
2–Per bar after first one. .....

Arch bar 1¼"x4":
3–Per first bar. .....
4–Per bar after first one. .....

Arch bar 1½"x4½":
5–Per first bar. .....
6–Per bar after first one. .....

Arch bar 1¾"x5" or 2"x5":
7–Per first bar. .....
8–Per bar after first one. .....

4U612–10 Formed (lugs at forge). **Rate** .....

Includes heating bent arch bar and forming lugs when no other work is done.

Arch bar 1"x3½":
13–Per first bar. .....
14–Per bar after first one. .....

Tender Truck

BAR, ARCH

Arch bar $1\frac{1}{8}$"x4":
15–Per first bar.....
16–Per bar after first one.....

Arch bar $1\frac{1}{4}$"x$4\frac{1}{2}$":
17–Per first bar.....
18–Per bar after first one.....

Arch $1\frac{3}{4}$"x5" or 2"x5":
19–Per first bar.....
20–Per bar after first one.....

4U612–13 Made complete (at forge). **Rate**.....

Includes making and bending top and bottom arch bars with tie bars, forming lugs on ends if necessary, fitting and finishing complete at forge.

As per sketch No. 1.

Bottom arch bar 1"x$3\frac{1}{2}$", top arch bar $1\frac{1}{8}$"x$3\frac{1}{2}$", tie bar $\frac{5}{8}$"x$3\frac{1}{2}$":
1–Per first frame.....
2–Per frame after first one.....

Bottom arch bar $1\frac{1}{8}$"x4", top arch bar $1\frac{1}{4}$"x4", tie bar $\frac{5}{8}$"x4":
3–Per first frame.....
4–Per frame after first one.....

Bottom arch bar $1\frac{3}{8}$"x$4\frac{1}{2}$", top arch bar $1\frac{1}{2}$"x$4\frac{1}{2}$", tie bar $\frac{5}{8}$"x$4\frac{1}{2}$":
5–Per first frame.....
6–Per frame after first one.....

Bottom arch bar $1\frac{3}{4}$"x5", top arch bar 2"x5", tie bar 1"x5":
7–Per first frame.....
8–Per frame after first one.....

As per sketch No. 2.

Bottom arch bar 1"x$3\frac{1}{2}$", top arch bar $1\frac{1}{8}$"x$3\frac{1}{2}$", tie bar $\frac{5}{8}$"x$3\frac{1}{2}$":
13–Per first frame.....
14–Per frame after first one.....

Bottom arch bar $1\frac{1}{8}$"x4", top arch bar $1\frac{1}{4}$"x4", tie bar $\frac{5}{8}$"x4":
15–Per first frame.....
16–Per frame after first one.....

Bottom arch bar $1\frac{3}{8}$"x$4\frac{1}{2}$", top arch bar $1\frac{1}{2}$"x$4\frac{1}{2}$", tie bar $\frac{5}{8}$"x$4\frac{1}{2}$":
17–Per first frame.....
18–Per frame after first one.....

Bottom arch bar $1\frac{3}{4}$"x5", top arch bar 2"x5", tie bar 1"x5":
19–Per first frame.....
20–Per frame after first one.....

TENDER TRUCK

Bar, Arch

Tender Truck
BAR, ARCH

4U612–13 Made (including heating top arch bar for bending). Rate.....

Same as schedules 4U612–13–1 to 4U612–13–20, but also includes heating top arch bar for bending.

As per sketch No. 1.

Bottom arch bar 1″x3½″, top arch bar 1⅛″x3½″, tie bar ⅝″x3½″:

25–Per first frame..... .....
26–Per frame after first one..... .....

Bottom arch bar 1¼″x4″, top arch bar 1¼″x4″, tie bar ⅝″x4″:

27–Per first frame..... .....
28–Per frame after first one..... .....

Bottom arch bar 1⅜″x4½″, top arch bar 1½″x4½″, tie bar ⅝″x4½″:

29–Per first frame..... .....
30–Per frame after first one..... .....

Bottom arch bar 1¾″x5″, top arch bar 2″x5″, tie bar 1″x5″:

31–Per first frame..... .....
32–Per frame after first one..... .....

As per sketch No. 2.

Bottom arch bar 1″x3½″, top arch bar 1⅛″x3½″, tie bar ⅝″x3½″:

36–Per first frame..... .....
37–Per frame after first one..... .....

Bottom arch bar 1¼″x4″, top arch bar 1¼″x4″, tie bar ⅝″x4″:

38–Per first frame..... .....
39–Per frame after first one..... .....

Bottom arch bar 1⅜″x4½″, top arch bar 1½″x4½″, tie bar ⅝″x4½″:

40–Per first frame..... .....
41–Per frame after first one..... .....

Bottom arch bar 1¾″x5″, top arch bar 2″x5″, tie bar 1″x5″:

42–Per first frame..... .....
43–Per frame after first one..... .....

4U612–13 Made (bottom arch bar only). Rate.....

Includes making and bending bottom arch bar, forming lugs on ends if necessary, fitting and finishing complete.

As per sketch No. 1.

Arch bar 1″x3½″:

51–Per first bar..... .....
52–Per bar after first one..... .....

Arch bar 1⅛″x4″:

53–Per first bar..... .....
54–Per bar after first one..... .....

Tender Truck
BAR, ARCH

Arch bar 1¼″x4½″:
55–Per first bar.....
56–Per bar after first one.....

Arch bar 1¾″x5″ or 2″x5″:
57–Per first bar.....
58–Per bar after first one.....

As per sketch No. 2.
Arch bar 1″x3½″:
63–Per first bar.....
64–Per bar after first one.....

Arch bar 1⅜″x4″:
65–Per first bar.....
66–Per bar after first one.....

Arch bar 1¼″x4½″:
67–Per first bar.....
68–Per bar after first one.....

Arch bar 1¾″x5″ or 2″x5″:
69–Per first bar.....
70–Per bar after first one.....

4U612-13 Made (top arch bar only). **Rate**.....

Includes making and bending top arch bar, fitting and finishing complete.
As per sketch No. 1.

Arch bar 1⅜″x3½″:
75–Per first bar.....
76–Per bar after first one.....

Arch bar 1¼″x4″:
77–Per first bar.....
78–Per bar after first one.....

Arch bar 1⅜″x4½″:
79–Per first bar.....
80–Per bar after first one.....

Arch bar 1¾″x5″ or 2″x5″:
81–Per first bar.....
82–Per bar after first one.....

As per sketch No. 2.
Arch bar 1⅜″x3½″:
87–Per first bar.....
88–Per bar after first one.....

Arch bar 1¼″x4″:
89–Per first bar.....
90–Per bar after first one.....

TENDER TRUCK
Bar, Arch

Tender Truck
BAR, ARCH

Arch bar 1⅜"x4½":
91–Per first bar.....
92–Per bar after first one.....

Arch bar 1¾"x5" or 2"x5":
93–Per first bar.....
94–Per bar after first one.....

4U612–13 Made (top arch bar only) (when iron is heated). Rate.....

Same as schedules 4U612–13–75 to 4U612–13–94, except iron is heated before bending.

As per sketch No. 1.

Arch bar 1⅛"x3½":
101–Per first bar.....
102–Per bar after first one.....

Arch bar 1¼"x4":
103–Per first bar.....
104–Per bar after first one.....

Arch bar 1⅜"x4½":
105–Per first bar.....
106–Per bar after first one.....

Arch bar 1¾"x5" or 2"x5":
107–Per first bar.....
108–Per bar after first one.....

As per sketch No. 2.

Arch bar 1⅛"x3½":
113–Per first bar.....
114–Per bar after first one.....

Arch bar 1¼"x4":
115–Per first bar.....
116–Per bar after first one.....

Arch bar 1⅜"x4½":
117–Per first bar.....
118–Per bar after first one.....

Arch bar 1¾"x5" or 2"x5":
119–Per first bar.....
120–Per bar after first one.....

4U612–18 Straightened (when badly bent). Rate.....

Includes straightening top or bottom arch bar when same has become badly bent or twisted.

Arch bar 1⅜"x4½" or less:
1–Per first bar.....
2–Per bar after first one.....

Tender Truck

BAR, ARCH

Arch bar $1\frac{1}{2}$"x$4\frac{1}{2}$" and less than $1\frac{3}{4}$"x5":
3–Per first bar.....
4–Per bar after first one.....

Arch bar $1\frac{3}{4}$"x5", 2"x5":
5–Per first bar.....
6–Per bar after first one.....

4U612–18 Straightened (when slightly bent). **Rate**.....

Includes straightening top or bottom arch bar when same has become slightly bent or twisted.

Arch bar $1\frac{3}{8}$"x$4\frac{1}{2}$" or less:
11–Per first bar.....
12–Per bar after first one.....

Arch bar $1\frac{1}{2}$"x$4\frac{1}{2}$" and less than $1\frac{3}{4}$"x5":
13–Per first bar.....
14–Per bar after first one.....

Arch bar $1\frac{3}{4}$"x5", 2"x5":
15–Per first bar.....
16–Per bar after first one.....

4U612–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in top or bottom arch bar, dressing and finishing over weld complete.

Arch bar $1\frac{3}{8}$"x$4\frac{1}{2}$" or less:
1–Per first bar.....
2–Per bar after first one.....

Arch bar over $1\frac{1}{2}$"x$4\frac{1}{2}$" and less than $1\frac{3}{4}$"x5":
3–Per first bar.....
4–Per bar after first one.....

Arch bar $1\frac{3}{4}$"x5", 2"x5":
5–Per first bar.....
6–Per bar after first one.....

4U612–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in top or bottom arch bar, dressing and finishing over weld complete.

Arch bar 1"x$3\frac{1}{2}$" or $1\frac{1}{8}$"x$3\frac{1}{2}$":
11–Per first bar.....
12–Per bar after first one.....

Arch bar $1\frac{1}{8}$"x4" or $1\frac{1}{4}$"x4":
13–Per first bar.....
14–Per bar after first one.....

TENDER TRUCK

Bar, Arch

Tender Truck
BAR, ARCH

Arch bar $1\frac{3}{8}$"x$4\frac{1}{2}$" or $1\frac{1}{2}$"x$4\frac{1}{2}$":
15–Per first bar.....
16–Per bar after first one.....

Arch bar $1\frac{3}{4}$"x5" or 2"x5":
17–Per first bar.....
18–Per bar after first one.....

4U612–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in top or bottom arch bar, dressing and finishing over weld complete.

Arch bar $1\frac{1}{2}$"x$4\frac{1}{2}$" or less:
21–Per first hole.....
22–Per hole after first one.....

Arch bar over $1\frac{1}{2}$"x$4\frac{1}{2}$" and less than $1\frac{3}{4}$"x5":
23–Per first hole.....
24–Per hole after first one.....

Arch bar $1\frac{3}{4}$"x5", 2"x5":
25–Per first hole.....
26–Per hole after first one.....

Tender Truck
BAR, TIE

4U616–2 Bent (cold). **Rate**.....

Includes bending tie bar cold.

Steam hammer:
1–Per tie bar, all sizes..... .....

Bulldozer:
2–Per first tie bar (includes changing dies)..... .....
3–Per tie bar after first one..... .....

Forge:
5–Per first tie bar..... .....
6–Per tie bar after first one..... .....

4U616–10 Formed (lugs) (at machine). **Rate**.....

Includes changing dies in machine, heating tie bar, and forming lugs on both ends of bar complete.

Machine:
1–Per first tie bar, all sizes..... .....
2–Per tie bar after first one, all sizes..... .....

4U616–10 Formed (lugs) (at forge). **Rate**.....

Includes heating tie bar and forming lugs on ends of same at forge when no other work is done.

Forge:
7–Per first tie bar, all sizes..... .....
8–Per tie bar after first one, all sizes..... .....

4U616–13 Made. **Rate**.....

Includes getting material, bending, forming lugs on ends if necessary, and finishing tie bar complete.

Tie bar with straight ends.
Tie bar $\frac{5}{8}''$x$3\frac{1}{2}''$:
1–Per first bar..... .....
2–Per bar after first one..... .....

Tie bar $\frac{5}{8}''$x4″:
3–Per first bar..... .....
4–Per bar after first one..... .....

Tie bar $\frac{3}{4}''$x$4\frac{1}{2}''$:
5–Per first bar..... .....
6–Per bar after first one..... .....

Tie bar 1″x5″:
7–Per first bar..... .....
8–Per bar after first one..... .....

TENDER TRUCK
Bar, Tie

Tender Truck
BAR, TIE

Tie bar with lugs on ends.

Tie bar $\frac{5}{8}$"x3$\frac{1}{2}$":
13–Per first bar..... .....
14–Per bar after first one..... .....

Tie bar $\frac{5}{8}$"x4":
15–Per first bar..... .....
16–Per bar after first one..... .....

Tie bar $\frac{3}{4}$"x4$\frac{1}{2}$":
17–Per first bar..... .....
18–Per bar after first one..... .....

Tie bar 1"x5":
19–Per first bar..... .....
20–Per bar after first one..... .....

4U616–18 Straightened (when badly bent). **Rate**.....

Includes straightening tie bar when same has become badly bent or twisted.

1–Per first tie bar..... .....
2–Per tie bar after first one..... .....

4U616–18 Straightened (when slightly bent). **Rate**.....

Includes straightening tie bar when same has become slightly bent.

7–Per first tie bar..... .....
8–Per tie bar after first one..... .....

4U616–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tie bar, dressing and finishing over weld complete.

1–Per first tie bar..... .....
2–Per tie bar after first one..... .....

4U616–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tie bar, dressing and finishing over weld complete.

11–Per first tie bar..... .....
12–Per tie bar after first one..... .....

4U616–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tie bar, dressing and finishing over weld complete.

17–Per first hole..... .....
18–Per hole after first one..... .....

Tender Truck

BOX, JOURNAL—BOLT

Tender Truck Journal Box Bolt



4U626

For operations on Tender Truck Journal Box Bolt, see schedules under Miscellaneous Bolts.

TENDER TRUCK

Box, Journal—Bolt

Tender Truck
COLUMN BOLT

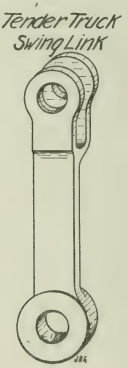
Tender Truck Column Bolt



4U636

For operations on Tender Truck Column Bolt, see schedules under Miscellaneous Bolts.

Tender Truck
SWING LINK



4U650–6 Dressed. **Rate**.....

Includes dressing jaw, dressing and finishing tender truck swing link to shape complete.

Forge:
1–Per first link..... .....
2–Per link after first one..... .....

4U650–9 Forged. **Rate**.....

Includes getting material, blocking out, cutting out jaw, and forging complete, tender truck swing link, ready for dressing.

Steam hammer:
1–Per first link..... .....
2–Per link after first one..... .....

Forge:
7–Per first link..... .....
8–Per link after first one..... .....

4U650–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaws, dressing and finishing tender truck swing link complete.

Forge:
11–Per first link..... .....
12–Per link after first one..... .....

TENDER TRUCK
Swing Link

Tender Truck
SWING LINK

4U650–12 Lengthened or shortened. **Rate**.....

Includes lengthening or shortening tender truck swing link by drawing out or upsetting same.

Forge:

1–Per first link..... .....
2–Per link after first one..... .....

4U650–18 Straightened. **Rate**.....

Includes straightening old tender truck swing link when same has become bent or twisted.

Forge:

1–Per first link..... .....
2–Per link after first one..... .....

4U650–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in tender truck swing link, dressing and finishing over weld complete.

Forge:

1–Per first place repaired..... .....
2–Per place repaired after first one..... .....

4U650–21 Welded (crack). **Rate**.....

Includes making dutchman, welding same in crack in tender truck swing link, dressing and finishing over weld complete.

Forge:

7–Per first place repaired..... .....
8–Per place repaired after first one..... .....

4U650–21 Welded (holes plugged). **Rate**.....

Includes making plug, welding same in hole in tender truck swing link, dressing and finishing over weld complete.

Forge.

Per first link:

11–In boss end..... .....
12–In jaw end..... .....

Per link after first one:

13–In boss end..... .....
14–In jaw end..... .....

4U650–21 Welded (new end). **Rate**.....

Includes getting new boss end or jaw end after same has been forged, doing necessary scarfing, and welding end on old tender truck swing link, dressing and finishing over weld complete.

Forge:

18–Per first end..... .....
19–Per end after first one..... .....

Tender Truck

SWING LINK—END, BOSS

4U656–6 Dressed. **Rate**.....

Includes dressing and finishing boss end of tender truck swing link after same has been forged.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4U656–9 Forged. **Rate**.....

Includes getting material, blocking out and forging boss end of tender truck swing link complete, ready for dressing.

Steam hammer:

1–Per first end..... .....
2–Per end after first one..... .....

Forge:

7–Per first end..... .....
8–Per end after first one..... .....

4U656–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing boss end of tender truck swing link complete.

Forge:

11–Per first end..... .....
12–Per end after first one..... .....

TENDER TRUCK

Swing Link Boss End

Tender Truck
SWING LINK—END, JAW

4U660–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for tender truck swing link jaw end.

Power shears:
1–Per piece cut..... .....

4U660–6 Dressed. **Rate**.....

Includes dressing and finishing jaw end of tender truck swing link complete.

Forge:
1–Per first end..... .....
2–Per end after first one..... .....

4U660–9 Forged. **Rate**.....

Includes getting material, blocking out and forging jaw end of tender truck swing link complete.

Forge.
Per first end:
1–When jaw is cut..... .....
2–When jaw is not cut..... .....
Per end after first one:
5–When jaw is cut..... .....
6–When jaw is not cut..... .....

4U660–9 Forged (at forging machine). **Rate**.....

Includes changing dies in forging machine and forging complete jaw end of tender truck swing link after material has been cut and delivered to machine.

Forging machine:
9–Per first end..... .....
10–Per end after first one..... .....

4U660–9 Forged and dressed. **Rate**.....

Includes getting material, blocking out, forging, cutting jaw, dressing and finishing tender truck swing link jaw end complete.

Forge:
14–Per first end..... .....
15–Per end after first one..... .....

4U660–18 Straightened. **Rate**.....

Includes straightening old tender truck swing link jaw end when same has become bent.

Forge:
1–Per first end..... .....
2–Per end after first one..... .....

MISCELLANEOUS

MISCELLANEOUS

Bolts

MISCELLANEOUS

4W2-4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for miscellaneous bolts after iron has been delivered to shears.

Power shears.

Per bolt cut:

1–Bolt $\frac{3}{8}$″ to $\frac{3}{4}$″ diam. incl. and less than 24″ long..... .....
2–Bolt $\frac{3}{8}$″ to $\frac{3}{4}$″ diam. incl. and 24″ to 48″ long incl..... .....
3–Bolt $\frac{3}{8}$″ to $\frac{3}{4}$″ diam. incl. and over 48″ to 60″ long incl.. .....
4–Bolt $\frac{3}{8}$″ to $\frac{3}{4}$″ diam. incl. and over 60″ long..... .....
5–Bolt $\frac{7}{8}$″ to $1\frac{1}{4}$″ diam. incl. and less than 26″ long..... .....
6–Bolt $\frac{7}{8}$″ to $1\frac{1}{4}$″ diam. incl. and 26″ long or over..... .....
7–Bolt $1\frac{3}{8}$″ to $1\frac{3}{4}$″ diam. incl. and less than 26″ long..... .....
8–Bolt $1\frac{3}{8}$″ to $1\frac{3}{4}$″ diam. incl. and 26″ long or over..... .....
9–Bolt $1\frac{7}{8}$″ to $2\frac{1}{4}$″ diam. incl. and less than 26″ long..... .....
10–Bolt $1\frac{7}{8}$″ to $2\frac{1}{4}$″ diam. incl. and 26″ long or over..... .....
11–Bolt $2\frac{1}{2}$″ to 3″ diam. incl. and less than 26″ long..... .....
12–Bolt $2\frac{1}{2}$″ to 3″ diam. incl. and 26″ long or over..... .....

4W2-15 Punched (hole or slot). **Rate**.....

Includes changing dies in machine and punching slot or round hole in miscellaneous bolts after bolt has been delivered to machine.

$1\frac{1}{2}$″ to $2\frac{1}{2}$″, Ajax machine.

Per first bolt:

1–Bolt 1″ to $1\frac{1}{4}$″ diam. incl..... .....
2–Bolt $1\frac{3}{8}$″ to $1\frac{1}{2}$″ diam. incl..... .....
3–Bolt $1\frac{5}{8}$″ to $1\frac{3}{4}$″ diam. incl..... .....
4–Bolt $1\frac{7}{8}$″ to 2″ diam. incl..... .....
5–Bolt $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diam. incl..... .....

Per bolt after first one:

8–Bolt 1″ to $1\frac{1}{4}$″ diam. incl..... .....
9–Bolt $1\frac{3}{8}$″ to $1\frac{1}{2}$″ diam. incl..... .....
10–Bolt $1\frac{5}{8}$″ to $1\frac{3}{4}$″ diam. incl..... .....
11–Bolt $1\frac{7}{8}$″ to 2″ diam. incl..... .....
12–Bolt $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diam. incl..... .....

Bolt

BUTTON OR COUNTERSUNK HEAD

4W4–9 Forged. **Rate**.....

Includes changing dies in machine, heating and forging button or countersunk head on bolt complete, after iron is cut and delivered to machine.

$1\frac{1}{2}$" to $2\frac{1}{2}$" Ajax, Lewis or National bolt machines.

Per first bolt:

1–Bolt $\frac{3}{8}$" to $\frac{1}{2}$" diam. incl..... .....
2–Bolt $\frac{5}{8}$" to $\frac{7}{8}$" diam. incl..... .....
3–Bolt 1" to $1\frac{1}{4}$" diam. incl..... .....
4–Bolt $1\frac{3}{8}$" to $1\frac{5}{8}$" diam. incl..... .....
5–Bolt $1\frac{3}{4}$" to 2" diam. incl..... .....

Per bolt after first one:

8–Bolt $\frac{3}{8}$" to $\frac{1}{2}$" diam. incl..... .....
9–Bolt $\frac{5}{8}$" to $\frac{7}{8}$" diam. incl..... .....
10–Bolt 1" to $1\frac{1}{4}$" diam. incl..... .....
11–Bolt $1\frac{3}{8}$" to $1\frac{5}{8}$" diam. incl..... .....
12–Bolt $1\frac{3}{4}$" to 2" diam. incl..... .....

Bolt

HEXAGONAL OR SQUARE HEAD

4W8–9 Forged. **Rate**.....

Includes changing dies in machine, heating and forging hexagonal or square head on bolt complete after iron is cut and delivered to machine.

$1\frac{1}{2}$″ to $2\frac{1}{2}$″ Ajax, National or Lewis machine.

Per first bolt:

1–Bolt $\frac{5}{8}$″ to $\frac{3}{4}$″ diam. incl..... .....
2–Bolt $\frac{7}{8}$″ to 1″ diam. incl..... .....
3–Bolt $1\frac{1}{8}$″ to $1\frac{1}{4}$″ diam. incl..... .....
4–Bolt $1\frac{3}{8}$″ to $1\frac{5}{8}$″ diam. incl..... .....
5–Bolt $1\frac{3}{4}$″ to 2″ diam. incl..... .....
6–Bolt $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diam. incl..... .....

Per bolt after first one:

10–Bolt $\frac{5}{8}$″ to $\frac{3}{4}$″ diam. incl..... .....
11–Bolt $\frac{7}{8}$″ to 1″ diam. incl..... .....
12–Bolt $1\frac{1}{8}$″ to $1\frac{1}{4}$″ diam. incl..... .....
13–Bolt $1\frac{3}{8}$″ to $1\frac{5}{8}$″ diam. incl..... .....
14–Bolt $1\frac{3}{4}$″ to 2″ diam. incl..... .....
15–Bolt $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diam. incl..... .....

Acme machine.

Per first bolt:

19–Bolt $\frac{5}{8}$″ to $\frac{3}{4}$″ diam. incl..... .....
20–Bolt $\frac{7}{8}$″ diam..... .....
21–Bolt 1″ diam..... .....
22–Bolt $1\frac{1}{8}$″ diam. incl..... .....
23–Bolt $1\frac{1}{2}$″ to $1\frac{3}{4}$″ diam. incl..... .....

Per bolt after first one:

27–Bolt $\frac{5}{8}$″ to $\frac{3}{4}$″ diam. incl..... .....
28–Bolt $\frac{7}{8}$″ diam..... .....
29–Bolt 1″ diam..... .....
30–Bolt $1\frac{1}{8}$″ to $1\frac{3}{4}$″ diam. incl..... .....
31–Bolt $1\frac{1}{2}$″ to $1\frac{3}{4}$″ diam. incl..... .....

4″ Ajax machine.

Per first bolt:

35–Bolt $2\frac{3}{4}$″ to 3″ diam. incl..... .....

Per bolt after first one:

36–Bolt $2\frac{3}{4}$″ to 3″ diam. incl..... .....

Bolt

ROUND HEAD

4W16–9 Forged. **Rate**.....

Includes changing dies in machine, heating and forging round head on bolt or pin complete, after iron has been delivered to machine.

$1\frac{1}{2}$″ to $2\frac{1}{2}$″ Ajax, National or Acme machine.

Per first pin or bolt:

1–Pin or bolt $\frac{3}{8}$″ to $\frac{1}{2}$″ diam. incl..... .....
2–Pin or bolt $\frac{5}{8}$″ to $\frac{3}{4}$″ diam. incl..... .....
3–Pin or bolt 1″ to $1\frac{1}{4}$″ diam. incl..... .....
4–Pin or bolt $1\frac{3}{8}$″ to $1\frac{5}{8}$″ diam. incl..... .....
5–Pin or bolt $1\frac{3}{4}$″ to 2″ diam. incl..... .....
6–Pin or bolt $2\frac{1}{4}$″ to $2\frac{1}{2}$″ diam. incl..... .....

Per pin or bolt after first one:

8–Pin or bolt $\frac{3}{8}$″ to $\frac{1}{2}$″ diam. incl..... .....
9–Pin or bolt $\frac{5}{8}$″ to $\frac{3}{4}$″ diam. incl..... .....
10–Pin or bolt 1″ to $1\frac{1}{4}$″ diam. incl..... .....
11–Pin or bolt $1\frac{3}{8}$″ to $1\frac{5}{8}$″ diam. incl..... .....
12–Pin or bolt $1\frac{3}{4}$″ to 2″ diam. incl..... .....

4″ Ajax machine.

Per first pin or bolt:

16–Pin or bolt $2\frac{3}{4}$″ to 3″ diam. incl..... .....
17–Pin or bolt $3\frac{1}{4}$″ to $3\frac{1}{2}$″ diam. incl..... .....
18–Pin or bolt $3\frac{3}{4}$″ to 4″ diam. incl..... .....

Per pin or bolt after first one:

22–Pin or bolt $2\frac{3}{4}$″ to 3″ diam. incl..... .....
23–Pin or bolt $3\frac{1}{4}$″ to $3\frac{1}{2}$″ diam. incl..... .....
24–Pin or bolt $3\frac{3}{4}$″ to 4″ diam. incl..... .....

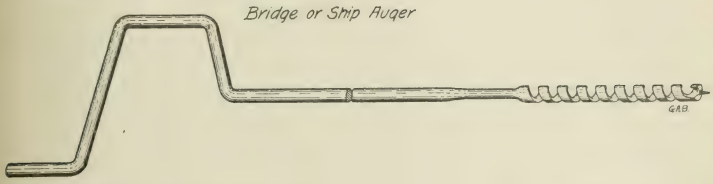
BOLTS

Round Head

TOOLS

TOOLS

AUGER, BRIDGE OR SHIP



4Y10–2 Bent—handle (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending handle of bridge or ship auger complete.

Bulldozer:

1–Per first handle..... .....

2–Per handle after first one..... .....

4Y10–4 Cut—iron for handle. **Rate**.....

Includes cutting iron at power sheats for handle of ship or bridge auger.

Power shears:

1–Per piece cut..... .....

4Y10–13 Made—handle (at forge). **Rate**.....

Includes getting material, bending, dressing and finishing handle for ship or bridge auger complete.

Forge:

1–Per first handle..... .....

2–Per handle after first one..... .....

4Y10–18 Straightened—handle. **Rate**.....

Includes straightening old handle for bridge or ship auger when same has become bent.

Forge:

1–Per first handle..... .....

2–Per handle after first one..... .....

4Y10–21 Welded—handle on auger. **Rate**.....

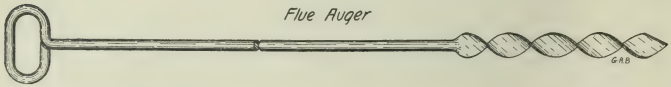
Includes doing necessary scarfing and welding handle on bridge or ship auger, dressing and finishing over weld complete.

Forge:

1–Per first handle..... .....

2–Per handle after first one..... .....

AUGER, FLUE



4Y14–13 Made complete. **Rate**.....

Includes getting material, bending, twisting, dressing and finishing flue auger complete.

Forge:

1–Per first auger..... .....
2–Per auger after first one..... .....

4Y14–13 Made—handle only. **Rate**.....

Includes getting material, bending and dressing handle for flue auger complete.

Forge:

7–Per first handle..... .....
8–Per handle after first one..... .....

4Y14–21 Welded—handle. **Rate**.....

Includes doing necessary scarfing, welding break in flue auger handle or welding handle on auger, dressing and finishing over weld complete.

Forge:

1–Per first weld..... .....
2–Per weld after first one..... .....

TOOLS

Auger, Flue

AWL, SCRATCH

4Y18-13 Made. **Rate**.....

Includes getting material, dressing and finishing scratch awl to shape complete.

Forge:

1–Per first awl..... .....
2–Per awl after first one..... .....

4Y18-19a Tempered. **Rate**.....

Includes tempering or retempering scratch awl complete.

Forge:

1–Per first awl..... .....
2–Per awl after first one..... .....

BAR, CHISEL



4Y26–6 Dressed and tempered. **Rate**.....

Includes straightening, forging out end, dressing and tempering old chisel bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y26–13 Made and tempered. **Rate**.....

Includes getting material for chisel bar, forging out end, dressing, finishing and tempering bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

TOOLS

Bar, Chisel

BAR, CLAW



4Y28–6 Dressed and tempered (claw end). **Rate**.....

Includes forging out, dressing, finishing and tempering claw end of claw bar complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4Y28–6 Dressed and tempered (top end). **Rate**.....

Includes forging out, dressing, finishing and tempering top end of claw bar complete.

Forge:

7–Per first end..... .....
8–Per end after first one..... .....

4Y28–13 Made. **Rate**.....

Includes getting material, forging out, dressing, finishing and tempering claw bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y28–18 Straightened. **Rate**.....

Includes straightening old claw bar when same has become bent.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

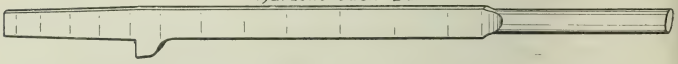
4Y28–21 Welded—new end. **Rate**.....

Includes getting material, welding new top or bottom end on claw bar, dressing and finishing end to shape, and tempering complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

BAR, HYDRAULIC JACK



4Y34–6 Dressed and tempered. **Rate**.....

Includes getting hydraulic jack bar after same has been forged, dressing ends and tempering complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y34–9 Forged. **Rate**.....

Includes getting material and forging out hydraulic jack bar complete, ready for dressing.

Steam hammer or forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y34–13 Made. **Rate**.....

Includes getting material, forging, dressing, finishing and tempering hydraulic jack bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y34–18 Straightened. **Rate**.....

Includes straightening old hydraulic jack bar when same has become bent.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y34–21 Welded—new end (making included). **Rate**.....

Includes getting material, forging and dressing new end for hydraulic jack bar, doing necessary scarfing, welding end on bar complete.

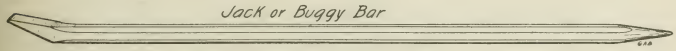
Forge:

1–Per first end..... .....
2–Per end after first one..... .....

TOOLS

Bar, Hydraulic Jack

BAR, JACK OR BUGGY



4Y38–6 Dressed (after pulled and straightened). **Rate**.....

Includes cutting to length jack or buggy bar when made from old springs, after bar has been pulled out and straightened.

Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

4Y38–6 Dressed (either end). **Rate**.....

Includes dressing, finishing and tempering either end of jack or buggy bar after bar has been forged.

Forge:
7–Per first end..... .....
8–Per end after first one..... .....

4Y38–13 Made (from steel stock). **Rate**.....

Includes getting steel stock, cutting to length, dressing, finishing and tempering jack or buggy bar complete.

Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

4Y38–13 Made (from old springs) (at bulldozer). **Rate**.....

Includes changing dies in bulldozer, getting old springs and pulling out same to form jack or buggy bar.

Forge:
7–Per first bar..... .....
8–Per bar after first one..... .....

4Y38–18 Straightened (after pulled out). **Rate**.....

Includes getting jack or buggy bar after same has been pulled out at bulldozer, and straightening complete.

Steam hammer:
1–Per first bar..... .....
2–Per bar after first one..... .....

4Y38–18 Straightened (old). **Rate**.....

Includes straightening old jack or buggy bar when no other work is done.

Forge:
7–Per first bar..... .....
8–Per bar after first one..... .....

BAR, LINING



4Y42–6 Dressed. **Rate**.....

Includes dressing, finishing and tempering lining bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y42–9 Forged (from old tires). **Rate**.....

Includes getting material, cutting to length and forging out old tires to make lining bar.

Steam hammer:

1–Per first bar..... .....
2–Per bar after first one..... .....

Forge:

3–Per first bar..... .....
4–Per bar after first one..... .....

4Y42–13 Made (from old tires). **Rate**.....

Includes getting material, cutting to length, forging out old tires, dressing, finishing and tempering lining bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y42–13 Made (from old claw bars). **Rate**.....

Includes getting old claw bars and forging down same, dressing, finishing and tempering lining bar complete.

Forge:

7–Per first bar..... .....
8–Per bar after first one..... .....

4Y42–18 Straightened. **Rate**.....

Includes straightening old lining bar when same has become bent.

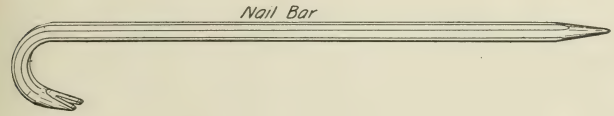
Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

TOOLS

Bar, Lining

BAR, NAIL



4Y44–6 Dressed (pointed end). **Rate**.....

Includes dressing, pointing and tempering nail bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y44–6 Dressed (claw end). **Rate**.....

Includes dressing out claw end on nail bar, finishing and tempering end complete.

Forge:

7–Per first end..... .....
8–Per end after first one..... .....

4Y44–13 Made. **Rate**.....

Includes getting material, cutting to length, dressing, finishing and tempering nail bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y44–18 Straightened. **Rate**.....

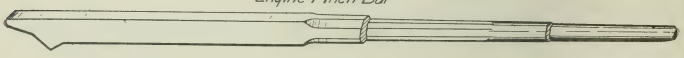
Includes straightening old nail bar when same has become bent.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

BAR, PINCH—ENGINE

Engine Pinch Bar



4Y48–6 Dressed. **Rate**.....

Includes dressing ends, finishing and tempering engine pinch bar after same has been forged.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y48–6 Dressed and tempered (old). **Rate**.....

Includes redressing old engine pinch bar, finishing and tempering ends complete.

Forge:

7–Per first bar..... .....
8–Per bar after first one..... .....

4Y48–9 Forged (from steel tires). **Rate**.....

Includes getting material, cutting to length and forging out engine pinch bar from old steel tires complete, ready for dressing.

Steam hammer:

1–Per first bar..... .....
2–Per bar after first one..... .....

Forge:

3–Per first bar..... .....
4–Per bar after first one..... .....

4Y48–13 Made complete (from steel tires). **Rate**.....

Includes cutting to length, drawing out, forging, dressing, finishing and tempering engine pinch bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y48–18 Straightened (when no other work is done). **Rate**.....

Includes straightening engine pinch bar when no other work is done.

Forge:

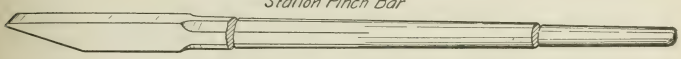
1–Per first bar..... .....
2–Per bar after first one..... .....

TOOLS

Bar, Pinch—Engine

BAR, PINCH—STATION

Station Pinch Bar



4Y50–6 Dressed. **Rate**.....

Includes dressing ends, finishing and tempering station pinch bar after same has been forged.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y50–6 Dressed and tempered (old). **Rate**.....

Includes redressing and tempering old station pinch bar.

Forge:

7–Per first bar..... .....
8–Per bar after first one..... .....

4Y50–9 Forged (from steel tires). **Rate**.....

Includes getting material, cutting to length and forging out station pinch bar from old steel tires complete, ready for dressing.

Steam hammer:

1–Per first bar..... .....
2–Per bar after first one..... .....

Forge:

3–Per first bar..... .....
4–Per bar after first one..... .....

4Y50–13 Made complete (from steel tires). **Rate**.....

Includes cutting to length, drawing out, forging, dressing, finishing and tempering station pinch bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

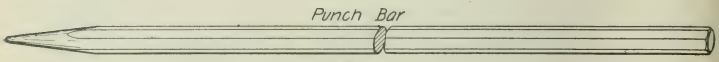
4Y50–18 Straightened. **Rate**.....

Includes straightening station pinch bar when no other work is done.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

BAR, PUNCH



4Y52–6 Dressed. **Rate**.....

Includes dressing, finishing and tempering punch bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y52–13 Made. **Rate**.....

Includes getting material, cutting to length, dressing, finishing and tempering punch bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y52–18 Straightened. **Rate**.....

Includes straightening old punch bar when same has become bent.

Forge:

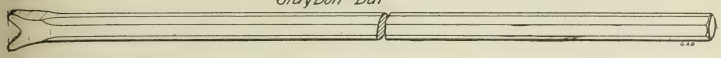
1–Per first bar..... .....
2–Per bar after first one..... .....

TOOLS

Bar, Punch

BAR, STAYBOLT

Staybolt Bar



4Y56–6 Dressed (old) (cut end). **Rate**.....

Includes redressing cut end of old staybolt bar, finishing and tempering complete.

Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

4Y56–13 Made complete. **Rate**.....

Includes getting material, dressing, finishing and tempering stay bolt bar complete.

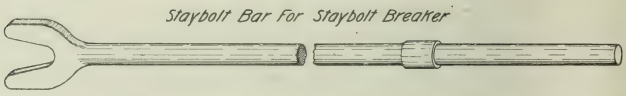
Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

4Y56–18 Straightened. **Rate**.....

Includes straightening old staybolt bar when same has become bent.

Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

BAR, STAYBOLT (FOR STAYBOLT BREAKER)



4Y58–6 Dressed (old) (cutting end). **Rate**.....

Includes dressing and finishing cutting end of old staybolt breaker bar and tempering complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4Y58–13 Made complete. **Rate**.....

Includes getting material, blocking out butting end and cutting end, welding ends on body of bar, dressing, finishing and tempering staybolt breaker bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y58–13 Made (butt end only). **Rate**.....

Includes getting material, forging and dressing butt end of staybolt breaker bar complete, ready for welding on bar.

Steam hammer:

7–Per first bar..... .....
8–Per bar after first one..... .....

Forge:

11–Per first bar..... .....
12–Per bar after first one..... .....

4Y58–13 Made (cutting end only). **Rate**.....

Includes getting material, forging and dressing cutting end of staybolt breaker bar complete, ready to weld on bar.

Forge:

17–Per first end..... .....
18–Per end after first one..... .....

4Y58–18 Straightened. **Rate**.....

Includes straightening old staybolt breaker bar when same has become bent.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

TOOLS

Bar, Staybolt (for Staybolt Breaker)

BAR, STAYBOLT (FOR STAYBOLT BREAKER)

4Y58-21 Welded (end on bar). **Rate**.....

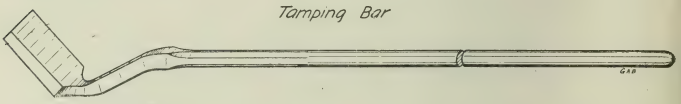
Includes getting butting end or cutting end of staybolt breaker bar after end has been made, doing necessary scarfing, welding end on bar, dressing, finishing and tempering complete.

Forge:

1–Per first end..... .....

2–Per end after first one..... .....

BAR, TAMPING



4Y60–6 Dressed (tamping end). **Rate**.....

Includes redressing tamping end of old tamping bar and tempering complete.

Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

4Y60–13 Made complete. **Rate**.....

Includes getting material, dressing, finishing and tempering tamping bar complete.

Steam hammer:
1–Per first bar..... .....
2–Per bar after first one..... .....

Forge:
3–Per first bar..... .....
4–Per bar after first one..... .....

4Y60–18 Straightened. **Rate**.....

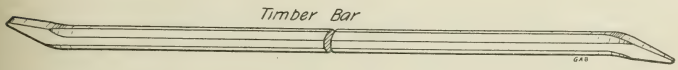
Includes straightening old tamping bar when same has become bent.

Forge:
1–Per first bar..... .....
2–Per bar after first one..... .....

TOOLS

Bar, Tamping

BAR, TIMBER



4Y62–6 Dressed (old) (either end). **Rate**.....

Includes redressing either end of old timber bar, finishing and tempering end complete.

Forge:

1–Per first end..... .....
2–Per bar after first one..... .....

4Y62–13 Made complete. **Rate**.....

Includes getting material, dressing, finishing and tempering timber bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

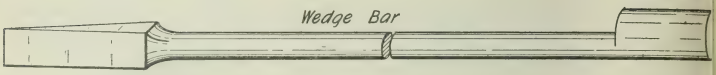
4Y62–18 Straightened. **Rate**.....

Includes straightening old timber bar when same has become bent.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

BAR, WEDGE



4Y70–6 Dressed (end). **Rate**.....

Includes doubling end over on old wedge bar to form hook, dressing and finishing complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4Y70–13 Made complete. **Rate**.....

Includes getting material, dressing, finishing and tempering wedge bar complete.

Forge:

1–Per first bar..... .....
2–Per bar after first one..... .....

4Y70–13 Made (wedge end only). **Rate**.....

Includes getting material, forging, dressing and finishing wedge end of wedge bar complete.

Steam hammer or forge:

11–Per first end..... .....
12–Per end after first one..... .....

4Y70–13 Made (hook end). **Rate**.....

Includes getting material, forging, dressing and finishing hook end of wedge bar complete.

Forge:

17–Per first end..... .....
18–Per end after first one..... .....

4Y70–21 Welded (to adjust length). **Rate**.....

Includes doing necessary scarfing, making necessary weld in wedge bar to adjust length complete.

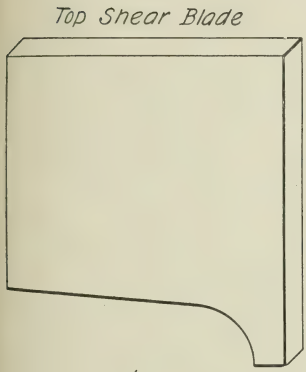
Forge:

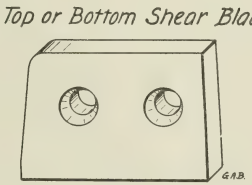
1–Per first weld..... .....
2–Per weld after first one..... .....

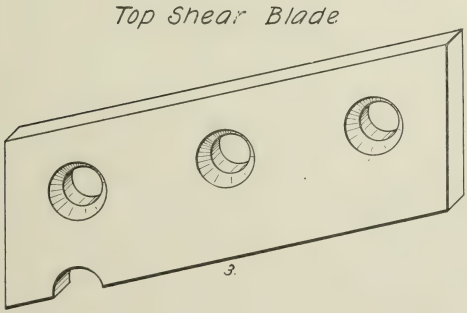
TOOLS

Bar, Wedge

BLADE, SHEAR—TOP OR BOTTOM

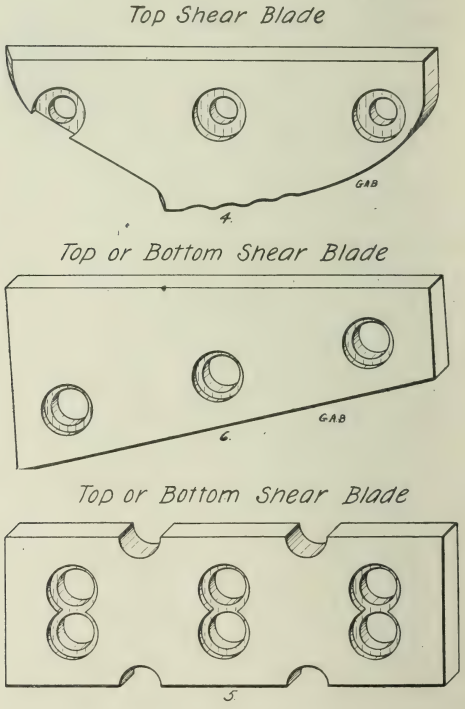






TOOLS
Blade, Shear—Top or Bottom

BLADE, SHEAR—TOP OR BOTTOM



TOOLS

Blade, Shear—Top or Bottom

BLADE, SHEAR—TOP OR BOTTOM

4Y80–0 Annealed. Rate.....

Includes annealing shear blade complete.

Forge:
1–Per first blade.....
2–Per blade after first one.....

Furnace:
3–Per first blade.....
4–Per blade after first one.....

4Y80–4 Cut—steel. Rate.....

Includes cutting steel for shear blade.

Steam hammer:
1–Per first blade.....
2–Per blade after first one.....

Forge:
3–Per first blade.....
4–Per blade after first one.....

4Y80–6 Dressed (old). Rate.....

Includes redressing and finishing shear blade complete.

Forge.
Per first blade:
1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....

Per blade after first one:
11–As per sketch No. 1.....
12–As per sketch No. 2.....
13–As per sketch No. 3.....
14–As per sketch No. 4.....
15–As per sketch No. 5.....
16–As per sketch No. 6.....

4Y80–9 Forged. Rate.....

Includes getting material and forging out shear blade complete.

Steam hammer.
Per first blade:
1–As per sketch No. 1.....
2–As per sketch No. 2.....
3–As per sketch No. 3.....
4–As per sketch No. 4.....
5–As per sketch No. 5.....
6–As per sketch No. 6.....

BLADE, SHEAR—TOP OR BOTTOM

Per blade after first one:

11–As per sketch No. 1 .....
12–As per sketch No. 2 .....
13–As per sketch No. 3 .....
14–As per sketch No. 4 .....
15–As per sketch No. 5 .....
16–As per sketch No. 6 .....

Forge.

Per first blade:

21–As per sketch No. 1 .....
22–As per sketch No. 2 .....
23–As per sketch No. 3 .....
24–As per sketch No. 4 .....
25–As per sketch No. 5 .....
26–As per sketch No. 6 .....

Per blade after first one:

31–As per sketch No. 1 .....
32–As per sketch No. 2 .....
33–As per sketch No. 3 .....
34–As per sketch No. 4 .....
35–As per sketch No. 5 .....
36–As per sketch No. 6 .....

4Y80-13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing shear blade complete.

Steam hammer.

Per first blade:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....
6–As per sketch No. 6 .....

Per blade after first one:

11–As per sketch No. 1 .....
12–As per sketch No. 2 .....
13–As per sketch No. 3 .....
14–As per sketch No. 4 .....
15–As per sketch No. 5 .....
16–As per sketch No. 6 .....

Forge.

Per first blade:

21–As per sketch No. 1 .....
22–As per sketch No. 2 .....
23–As per sketch No. 3 .....
24–As per sketch No. 4 .....
25–As per sketch No. 5 .....
26–As per sketch No. 6 .....

TOOLS

Blade, Shear—Top or Bottom

BLADE, SHEAR—TOP OR BOTTOM

Per blade after first one:

31–As per sketch No. 1 .....
32–As per sketch No. 2 .....
33–As per sketch No. 3 .....
34–As per sketch No. 4 .....
35–As per sketch No. 5 .....
36–As per sketch No. 6 .....

4Y80–19a Tempered. **Rate** .....

Includes tempering shear blade complete.

Forge.

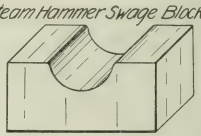
Per first blade:

1–As per sketch No. 1 .....
2–As per sketch No. 2 .....
3–As per sketch No. 3 .....
4–As per sketch No. 4 .....
5–As per sketch No. 5 .....
6–As per sketch No. 6 .....

Per blade after first one:

11–As per sketch No. 1 .....
12–As per sketch No. 2 .....
13–As per sketch No. 3 .....
14–As per sketch No. 4 .....
15–As per sketch No. 5 .....
16–As per sketch No. 6 .....

BLOCK, SWAGE—STEAM HAMMER



4Y86–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing steam hammer swage block complete.

Steam hammer.

2″ wide or less:

1–Per first block.....

2–Per block after first one.....

Over 2″ to 5″ wide inclusive:

3–Per first block.....

4–Per block after first one.....

Over 5″ to 8″ wide inclusive:

5–Per first block.....

6–Per block after first one.....

Over 8″ wide:

7–Per first block.....

8–Per block after first one.....

Forge.

2″ wide or less:

11–Per first block.....

12–Per block after first one.....

Over 2″ to 5″ wide inclusive.....

13–Per first block.....

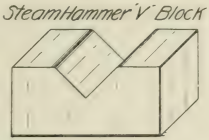
14–Per block after first one.....

Over 5″ to 8″ wide inclusive:

15–Per first block.....

16–Per block after first one.....

BLOCK, "V"—STEAM HAMMER



4Y88-13 Made. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing steam hammer "V" block complete.

Steam hammer.

4" wide or less:

1–Per first block ....
2–Per block after first one..... .....

Over 4" to 7" wide inclusive:

3–Per first block ....
4–Per block after first one..... .....

Over 7" wide:

5–Per first block ....
6–Per block after first one..... .....

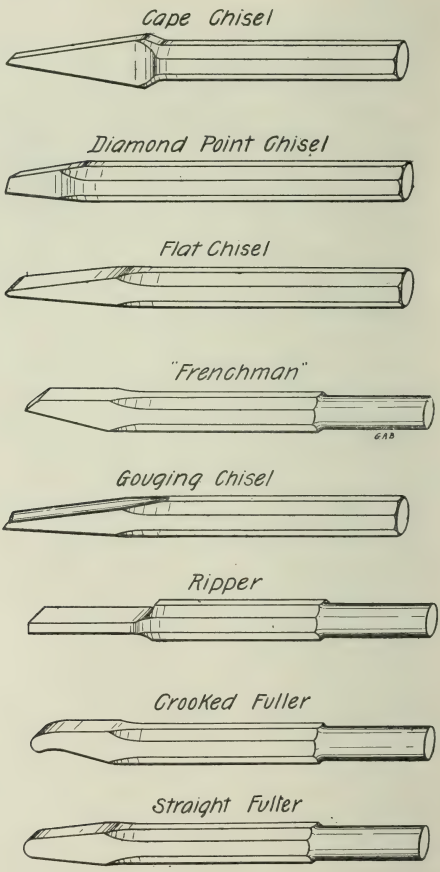
Forge.

4" wide or less:

11–Per first block ....
12–Per block after first one..... .....

Over 4" to 7" wide:

13–Per first block ....
14–Per block after first one..... .....



Note.

The schedules below apply to the following:

Cape Chisel.	Gouging Chisel.
Diamond Point Chisel.	Ripper.
Flat Chisel.	Crooked Fuller.
Frenchman.	Straight Fuller.

CHISEL, MISCELLANEOUS

4Y100–0 Annealed. Rate.....

Includes annealing any one of above chisels at furnace complete.

Furnace:

1–Per chisel..... .....

4Y100–4 Cut—steel. Rate.....

Includes getting steel for any one of above chisels and cutting to length complete.

1–Per piece cut..... .....

4Y100–6 Dressed (old, complete). Rate.....

Includes redressing old chisel as above to shape complete.

Forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

4Y100–6 Dressed (old) (cutting end only). Rate.....

Includes redressing old chisel as above and tempering end complete.

Forge.

Chisel 1″ or less in diameter:

7–Per first end..... .....
8–Per end after first one..... .....

Chisel over 1″ in diameter:

9–Per first end..... .....
10–Per end after first one..... .....

4Y100–13 Made. Rate.....

Includes getting steel for chisel as above, after same has been cut to length, dressing and finishing to shape, and tempering cutting edge complete.

Forge.

Chisel 1″ or less in diameter:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

Chisel over 1″ in diameter:

3–Per first chisel..... .....
4–Per chisel after first one..... .....

4Y100–19a Tempered (butt end). Rate.....

Includes tempering butt end of any chisel as above, complete.

Forge.

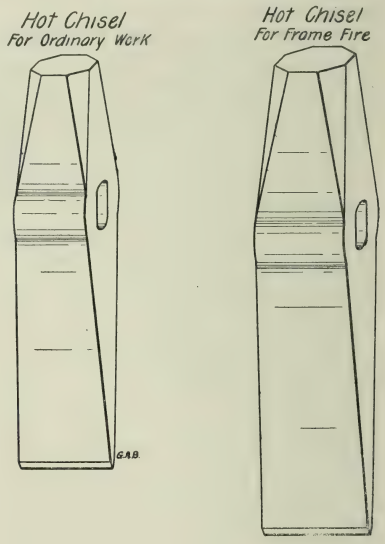
Chisel 1″ or less in diameter:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

Chisel over 1″ in diameter:

3–Per first chisel..... .....
4–Per chisel after first one..... .....

CHISEL, HOT OR COLD—BLACKSMITH'S



Note.

Track chisel similar to hot chisel and times on operations are the same.

4Y120–6 Dressed (after forged). **Rate**.....

Includes getting blacksmith's hot or cold chisel after same has been forged, punching hole for handle, dressing and finishing to shape complete.

Forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

4Y120–6 Dressed (old). **Rate**.....

Includes redressing and finishing old blacksmith's hot or cold chisel complete.

Forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

TOOLS

Chisel, Hot or Cold—Blacksmith's

CHISEL, HOT OR COLD—BLACKSMITH'S

4Y120-9 Forged. **Rate**.....

Includes getting material and forging blacksmith's hot or cold chisel complete, ready for dressing.

Steam hammer or forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

4Y120-13 Made complete. **Rate**.....

Includes getting material, forging, dressing and finishing blacksmith's hot or cold chisel complete.

Steam hammer or forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

CHISEL, WOOD

4Y146–6 Dressed and tempered (old). **Rate**.....

Includes redressing and tempering old wood chisel complete.

Forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

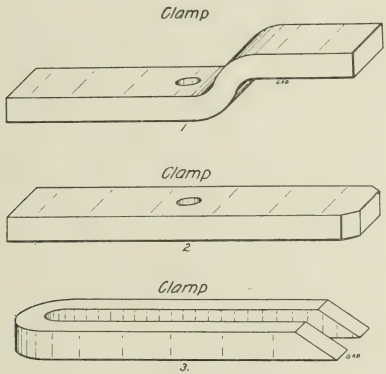
4Y146–13 Made (from bar steel). **Rate**.....

Includes getting bar steel, cutting to length, dressing, finishing and tempering wood chisel complete.

Forge:

1–Per first chisel..... .....
2–Per chisel after first one..... .....

CLAMP, PLANER



4Y160–2 Bent (at bulldozer). **Rate**.....

Includes changing dies in bulldozer and bending planer clamp complete.

Forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

4Y160–4 Cut—steel. **Rate**.....

Includes cutting steel for planer clamp.

Forge:

1–Per first piece cut..... .....
2–Per piece cut after first one..... .....

Y160–6 Dressed (after bent) (as per sketch No. 3). **Rate**.....

Includes dressing and finishing planer clamp as per sketch No. 3, after same has been bent.

Forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

CLAMP, PLANER

4Y160–13 Made. **Rate**.....

Includes getting material, cutting to length, bending and finishing planer clamp complete.

Forge.

Per first clamp:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....
3–As per sketch No. 3..... .....

Per clamp after first one:

4–As per sketch No. 1..... .....
5–As per sketch No. 2..... .....
6–As per sketch No. 3..... .....

4Y160–18 Straightened. **Rate**.....

Includes straightening old planer clamp when same has become bent.

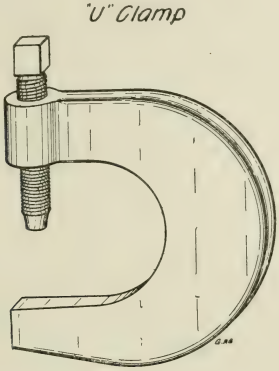
Forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

TOOLS

Clamp, Planer

CLAMP, "U"



4Y164–6 Dressed (after forged). **Rate**.....

Includes dressing and finishing "U" clamp complete, after same has been forged.

Forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

4Y164–9 Forged. **Rate**.....

Includes getting material, forging out "U" clamp, bending same complete, ready for dressing.

Steam hammer or forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

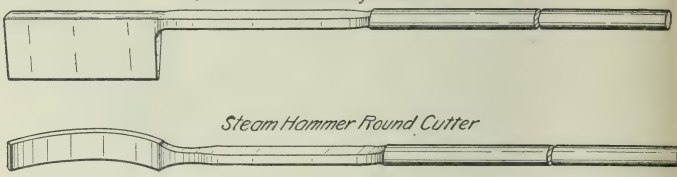
4Y164–13 Made complete. **Rate**.....

Includes getting material, forging, bending, dressing and finishing "U" clamp complete.

Steam hammer or forge:

1–Per first clamp..... .....
2–Per clamp after first one..... .....

CUTTER, ROUND OR STRAIGHT—STEAM HAMMER



4Y170–6 Dressed (after forged). **Rate**.....

Includes dressing and finishing steam hammer round or straight cutter after same has been forged.

Forge:

1–Per first cutter..... .....
2–Per cutter after first one..... .....

4Y170–6 Dressed (old). **Rate**.....

Includes redressing and finishing old steam hammer straight or round cutter complete.

Forge:

7–Per first cutter..... .....
8–Per cutter after first one..... .....

4Y170–9 Forged. **Rate**.....

Includes getting material and forging out steam hammer straight or round hammer complete, ready for dressing.

Steam hammer or forge:

1–Per first cutter..... .....
2–Per cutter after first one..... .....

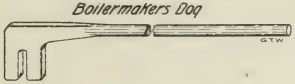
4Y170–13 Made complete. **Rate**.....

Includes getting material, forging out steam hammer straight or round cutter, dressing and finishing same complete.

Steam hammer or forge:

1–Per first cutter..... .....
2–Per cutter after first one..... .....

DOG, BOILERMAKER'S



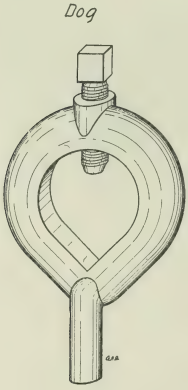
4Y180–13 Made. **Rate**.....

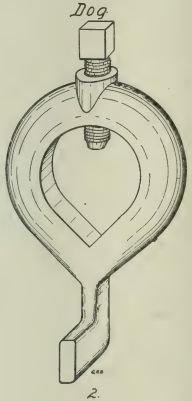
Includes getting material, forging, doing necessary scarfing, welding, dressing and finishing boilermaker's dog complete.

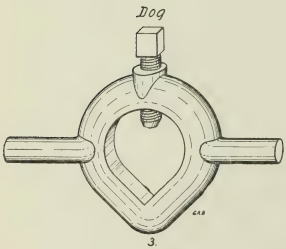
Forge:

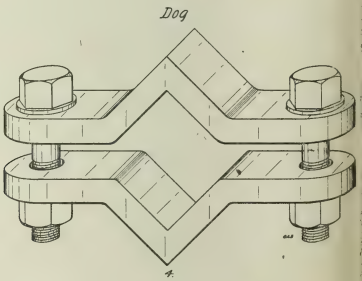
1–Per first dog..... .....
2–Per dog after first one..... .....

DOG, LATHE









4Y182–6 Dressed. **Rate**.....

Includes getting lathe dog after same has been forged, bending, welding, dressing and finishing same to shape complete.

Forge.

Sketches Nos. 1 and 2.

Inside diameter $4\frac{1}{2}''$ or less:

1–Per first dog..... .....
2–Per dog after first one..... .....

TOOLS

Dog, Lathe

DOG, LATHE

Inside diameter over 4½″ to 7″ inclusive:
3–Per first dog.....
4–Per dog after first one.....

Inside diameter over 7″:
5–Per first dog.....
6–Per dog after first one.....

Sketch No. 3:
Inside diameter 4½″ or less:
7–Per first dog.....
8–Per dog after first one.....

Inside diameter over 4½″ to 7″ inclusive:
9–Per first dog.....
10–Per dog after first one.....

Inside diameter over 7″:
11–Per first dog.....
12–Per dog after first one.....

4Y182–9 Forged. **Rate**.....

Includes getting material, forging and bending lathe dog complete, ready for dressing.

Steam hammer or forge.
Sketches Nos. 1 and 2.
Inside diameter 4½″ or less:
1–Per first dog.....
2–Per dog after first one.....

Inside diameter over 4½″ to 7″ inclusive:
3–Per first dog.....
4–Per dog after first one.....

Inside diameter over 7″:
5–Per first dog.....
6–Per dog after first one.....

Sketch No. 3.
Inside diameter 4½″ or less:
7–Per first dog.....
8–Per dog after first one.....

Inside diameter over 4½″ to 7″ inclusive:
9–Per first dog.....
10–Per dog after first one.....

Inside diameter over 7″:
11–Per first dog.....
12–Per dog after first one.....

DOG, LATHE

4Y182–13 Made complete. **Rate**.....

Includes getting material, forging, doing necessary scarfing, welding, dressing and finishing lathe dog complete.

Forge or steam hammer.

Sketches Nos. 1 and 2:

Inside diameter $4\frac{1}{2}''$ or less:

1–Per first dog..... .....
2–Per dog after first one..... .....

Inside diameter over $4\frac{1}{2}''$ to $7''$ inclusive:

3–Per first dog..... .....
4–Per dog after first one..... .....

Inside diameter over $7''$:

5–Per first dog..... .....
6–Per dog after first one..... .....

Sketch No. 3:

Inside diameter $4\frac{1}{2}''$ or less:

7–Per first dog..... .....
8–Per dog after first one..... .....

Inside diameter over $4\frac{1}{2}''$ to $7''$ inclusive:

9–Per first dog..... .....
10–Per dog after first one..... .....

Inside diameter over $7''$:

11–Per first dog..... .....
12–Per dog after first one..... .....

Sketch No. 4:

Hole $6''$ square or less:

16–Per first dog of two halves..... .....
17–Per dog of two halves after first one..... .....

Hole over $6''$ square:

18–Per first dog of two halves..... .....
19–Per dog of two halves after first one..... .....

4Y182–18 Straightened. **Rate**.....

Includes straightening old lathe dog when same has become bent.

Forge:

1–Per first dog..... .....
2–Per dog after first one..... .....

4Y182–21 Welded (new tail end). **Rate**.....

Includes getting material and welding new tail end on old dog, dressing and finishing over weld complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

TOOLS

Dog, Lathe

DOG, LATHE—SET-SCREW

4Y184-19a Tempered. **Rate**.....

Includes tempering lathe dog set-screw complete.

Forge:

1–Per first screw..... .....
2–Per screw after first one..... .....

DOG, STOP—NORTON JACK

4Y188–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing stop dog for Norton jack complete.

Forge:

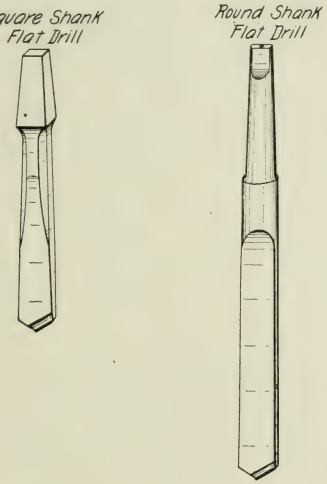
1–Per first dog..... .....

2–Per dog after first one..... .....

TOOLS

Dog, Stop—Norton Jack

DRILL, FLAT—ROUND OR SQUARE SHANK



4Y194–6 Dressed (old) (top end). **Rate**.....

Includes redressing top end of old flat drill and tempering complete.

Forge:

1–Per first drill..... .....
2–Per drill after first one..... .....

4Y194–6 Dressed (old complete). **Rate**.....

Includes redressing old flat drill and tempering complete.

Forge.

Per first drill:

7–Drill 1″ or less..... .....
8–Drill over 1″..... .....

Per drill after first one:

9–Drill 1″ or less..... .....
10–Drill over 1″..... .....

DRILL, FLAT—ROUND OR SQUARE SHANK

4Y194–13 Made complete. **Rate**.....

Includes getting material, forging, dressing, finishing and tempering flat drill complete.

Forge.

Per first drill:

1–Drill 1″ or less.....

2–Drill over 1″.....

Per drill after first one:

3–Drill 1″ or less.....

4–Drill over 1″.....

4Y194–21 Welded (new top end). **Rate**.....

Includes welding new top end on old flat drill, dressing, finishing and tempering complete.

Forge.

Per first drill:

1–Drill 1″ or less.....

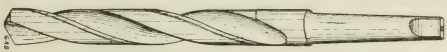
2–Drill over 1″.....

Per drill after first one:

3–Drill 1″ or less.....

4–Drill over 1″.....

DRILL, TWIST



4Y198–0 Annealed. **Rate**.....

Includes annealing old twist drill at forge.

1–Per first drill..... .....
2–Per drill after first one..... .....

4Y198–6 Dressed (old) (top end). **Rate**.....

Includes redressing top end of old twist drill and tempering complete.

Forge:

1–Per first drill..... .....
2–Per drill after first one..... .....

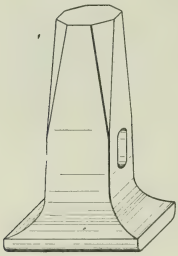
4Y198–19a Tempered. **Rate**.....

Includes tempering old twist drill complete at forge.

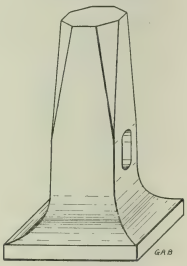
1–Per first drill..... .....
2–Per drill after first one..... .....

FLATTER, ROUND OR SQUARE

Round Flatter



Square Flatter



4Y210–6 Dressed. **Rate**.....

Includes getting round or square flatter after same has been forged, punching hole, and dressing both top and bottom end complete.

Forge:

1–Per first flatter ....
2–Per flatter after first one ....

4Y210–9 Forged. **Rate**.....

Includes getting steel for round or square flatter, cutting same to length and flattening in die complete, ready for dressing.

Steam hammer:

1–Per first flatter ....
2–Per flatter after first one ....

Forge:

3–Per first flatter ....
4–Per flatter after first one ....

4Y210–13 Made complete. **Rate**.....

Includes cutting off steel for round or square flatter, flattening same in die, stripping, punching hole, finishing top and bottom end complete, ready to be ground at emery wheel.

Steam hammer:

1–Per first flatter ....
2–Per flatter after first one ....

Forge:

3–Per first flatter ....
4–Per flatter after first one ....

TOOLS

Flatter, Round or Square

FLATTER, STEAM HAMMER



4Y214–13 Made complete. **Rate** .....

Includes getting material, forging, dressing and finishing steam hammer flatter complete.

Steam hammer or forge:

1–Per first flatter ....
2–Per flatter after first one ....

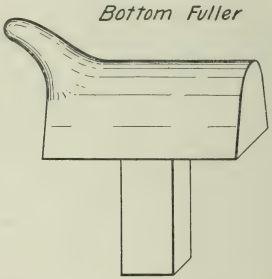
4Y214–21 Welded (handles). **Rate** .....

Includes getting material, doing necessary scarfing and welding new handle on old steam hammer flatter, dressing and finishing over weld complete.

Forge:

1–Per first handle ....
2–Per handle after first one ....

FULLER, BOTTOM



4Y220–6 Dressed. **Rate**.....

Includes dressing and finishing bottom fuller complete, after same has been forged.

Forge:

1–Per first fuller..... .....
2–Per fuller after first one..... .....

4Y220–9 Forged. **Rate**.....

Includes getting material, blocking out and forging bottom fuller complete, ready for dressing.

Steam hammer or forge:

1–Per first fuller..... .....
2–Per fuller after first one..... .....

4Y220–13 Made complete. **Rate**.....

Includes getting material, blocking out, forging, dressing and finishing bottom fuller complete.

Forge:

1–Per first fuller..... .....
2–Per fuller after first one..... .....

TOOLS

Fuller, Bottom

FULLER, ROUND—STEAM HAMMER

Steam Hammer Round Fuller



4Y228–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing steam hammer round fuller complete.

Steam hammer or forge:

1–Per first fuller..... .....
2–Per fuller after first one..... .....

FULLER, THREE-CORNERED—STEAM HAMMER



4Y232–6 Dressed. **Rate**.....

Includes dressing and finishing steam hammer three-cornered fuller complete, after same has been forged.

Forge:

1–Per first fuller..... .....
2–Per fuller after first one..... .....

4Y232–9 Forged. **Rate**.....

Includes getting material, forging steam hammer three-cornered fuller complete, ready for dressing.

Steam hammer or forge:

1–Per first fuller..... .....
2–Per fuller after first one..... .....

4Y232–13 Made complete. **Rate**.....

Includes getting material, forging, dressing and finishing steam hammer three-cornered fuller complete.

Steam hammer or forge:

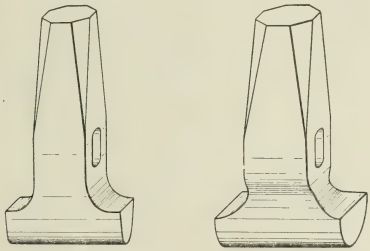
1–Per first fuller..... .....
2–Per fuller after first one..... .....

TOOLS

Fuller, Three-cornered—Steam Hammer

FULLER, TOP

Top Fullers



4Y234–6 Dressed. **Rate**.....

Includes punching handle hole, dressing and finishing top fuller complete, after same has been forged.

Forge.

Per first fuller:

1–Radius 1″ or less..... .....
2–Radius over 1″ to $1\frac{3}{4}$″ incl..... .....
3–Radius over $1\frac{3}{4}$″..... .....

Per fuller after first one:

4–Radius 1″ or less..... .....
5–Radius over 1″ to $1\frac{3}{4}$″ incl..... .....
6–Radius over $1\frac{3}{4}$″..... .....

4Y234–9 Forged. **Rate**.....

Includes getting steel, cutting same to length, and forging top fuller complete, ready for dressing.

Steam hammer.

Per first fuller:

1–Radius 1″ or less..... .....
2–Radius over 1″ to $1\frac{3}{4}$″ incl..... .....
3–Radius over $1\frac{3}{4}$″..... .....

Per fuller after first one:

4–Radius 1″ or less..... .....
5–Radius over 1″ to $1\frac{3}{4}$″ incl..... .....
6–Radius over $1\frac{3}{4}$″..... .....

Forge.

Per first fuller:

11–Radius 1″ or less..... .....
12–Radius over 1″ to $1\frac{3}{4}$″ incl..... .....
13–Radius over $1\frac{3}{4}$″..... .....

FULLER, TOP

Per fuller after first one:

14–Radius 1″ or less.....
15–Radius over 1″ to 1¾″ incl.....
16–Radius over 1¾″.....

4Y234–13 Made complete. **Rate**.....

Includes getting material, forging, dressing and finishing top fuller complete.

Forge.

Per first fuller:

1–Radius 1″ or less.....
2–Radius over 1″ to 1¾″ incl.....
3–Radius over 1¾″.....

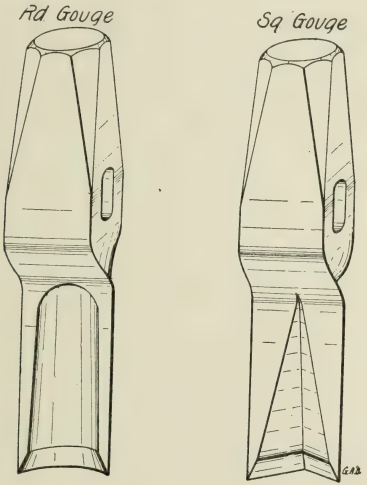
Per fuller after first one:

4–Radius 1″ or less.....
5–Radius over 1″ to 1¾″ incl.....
6–Radius over 1¾″.....

TOOLS

Fuller, Top

GOUGE, ROUND OR SQUARE



4Y250–6 Dressed (after forged). **Rate**.....

Includes dressing and finishing round or square gouge after same has been forged.

Forge:

1–Per first gouge..... .....
2–Per gouge after first one..... .....

4Y250–6 Dressed (old). **Rate**.....

Includes redressing old round or square gouge complete.

Forge:

1–Per first gouge..... .....
2–Per gouge after first one..... .....

4Y250–9 Forged. **Rate**.....

Includes getting material, cutting to length and forging round or square gouge complete, ready for dressing.

Steam hammer or forge:

1–Per first gouge..... .....
2–Per gouge after first one..... .....

GOUGE, ROUND OR SQUARE

4Y250–13 Made complete. **Rate**.....

Includes getting material, cutting to length, forging, dressing and finishing round or square gouge complete.

Steam hammer or forge:

1–Per first gouge..... .....

2–Per gouge after first one..... .....

TOOLS

Gouge, Round or Square

HAMMER, BACKING—BLACKSMITH'S

4Y260–6 Dressed (old). **Rate**.....

Includes redressing old blacksmith's backing hammer complete.

Forge:

1–Per first hammer..... .....
2–Per hammer after first one..... .....

4Y260–13 Made. **Rate**.....

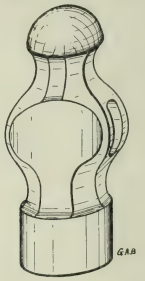
Includes getting $1\frac{3}{4}$" or 2" square steel, cutting to length, dressing and finishing to form blacksmith's backing hammer complete.

Forge:

1–Per first hammer..... .....
2–Per hammer after first one..... ....

HAMMER, HAND

Hand Hammer



4Y264–6 Dressed (either end). **Rate**.....

Includes dressing, finishing and tempering either end of old hand hammer complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

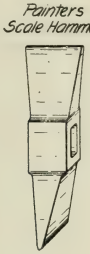
4Y264–13 Made. **Rate**.....

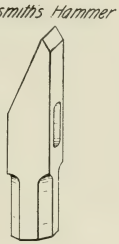
Includes getting material, cutting to length, forging, dressing, finishing and tempering hand hammer complete.

Forge:

1–Per first hammer..... .....
2–Per hammer after first one..... .....

HAMMER, SCALE—PAINTER'S





Note.

Times for operations on Tinsmith's hammer same as Painter's Scale Hammer.

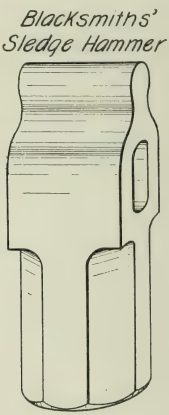
4Y268–13 Made. **Rate**.....

Includes getting material, forging, dressing, finishing and tempering painter's hand hammer or tinsmith's hammer complete.

Forge:

1–Per first hammer..... .....
2–Per hammer after first one..... .....

HAMMER, SLEDGE—BLACKSMITH'S



4Y272–6 Dressed (face). **Rate**.....

Includes dressing and finishing face of blacksmith's sledge hammer, and tempering complete.

Forge:
1–Per first face, all sizes..... .....
2–Per face after first one, all sizes..... .....

4Y272–6 Dressed (peen). **Rate**.....

Includes dressing and finishing peen end of blacksmith's sledge hammer, and tempering complete.

Forge:
7–Per first hammer..... .....
8–Per hammer after first one..... .....

4Y272–13 Made complete. **Rate**.....

Includes getting material, forging, dressing, finishing and tempering blacksmith's sledge hammer complete.

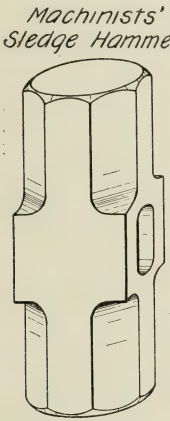
Forge.
Per first hammer:
1–18 lb. or less..... .....
2–Over 18 lb..... .....

Per hammer after first one:
3–18 lb. or less..... .....
4–Over 18 lb..... .....

TOOLS

Hammer, Sledge—Blacksmith's

HAMMER, SLEDGE—MACHINIST'S



4Y274–6 Dressed (either end). **Rate**.....

Includes dressing, finishing and tempering either face or peen end of machinist's sledge hammer complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4Y274–13 Made complete. **Rate**.....

Includes getting material, forging, dressing and finishing and tempering machinist's sledge hammer complete.

Forge:

1–Per first hammer..... .....
2–Per hammer after first one..... .....

HOOK, CANT



4Y290–13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing cant hook complete.

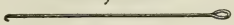
Forge:

1–Per first hook..... .....
2–Per hook after first one..... .....

TOOLS

Hook, Cant

HOOK, PACKING



4Y294–6 Dressed (point turned). Rate.....

Includes turning point on packing hook after eye is bent and end forged down.

Forge:
1–Per first hook..... .....
2–Per hook after first one..... .....

4Y294–6 Dressed (eye turned). Rate.....

Includes turning eye on packing hook complete.

Forge:
1–Per first hook..... .....
2–Per hook after first one..... .....

4Y294–9 Forged (end of hook). Rate.....

Includes forging down end of packing hook after eye has been turned.

Forge:
1–Per first hook..... .....
2–Per hook after first one..... .....

4Y294–13 Made complete. Rate.....

Includes getting material, cutting to length, turning eye, forging down point and turning same, and finishing packing hook complete.

Forge:
1–Per first hook..... .....
2–Per hook after first one..... .....

HOOK, PIKE POLE



4Y296–13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing pike pole hook complete.

Forge:

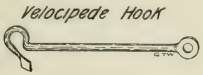
1–Per first hook..... .....

2–Per hook after first one..... .....

TOOLS

Hook, Pike Pole

HOOK, VELOCIPEDE



4Y300-13 Made. **Rate**.....

Includes getting material, cutting to length, forging, bending, dressing and finishing velocipede hook complete.

Forge:

1–Per first hook..... .....
2–Per hook after first one..... .....

IRON, PACKING



4Y310–4 Cut—Iron. **Rate**.....

Includes cutting iron at power shears for packing iron complete.

Power shears:

1–Per piece cut..... .....

4Y310–6 Dressed (eyes at machine). **Rate**.....

Includes changing dies in forging machine and turning eyes on packing iron.

Machine:

1–Per first iron..... .....
2–Per iron after first one..... .....

4Y310–9 Forged (ends). **Rate**.....

Includes forging down ends of packing iron after eyes have been made at machine.

Steam hammer:

1–Per first iron..... .....
2–Per iron after first one..... .....

4Y310–13 Made complete. **Rate**.....

Includes getting material, cutting to length, turning eyes, forging down point, dressing and finishing packing iron to shape complete.

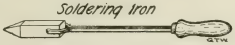
Forge:

1–Per first iron..... .....
2–Per iron after first one..... .....

TOOLS

Iron, Packing

IRON, SOLDERING



4Y314–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing soldering iron complete.

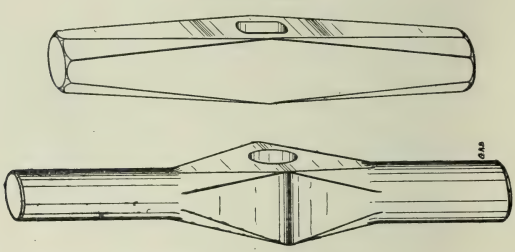
Forge:

1–Per first iron..... .....

2–Per iron after first one..... .....

MAUL, TRACK

Track Maul



4Y320–6 Dressed and tempered. **Rate**.....

Includes dressing and tempering either end of track maul complete at forge.

1–Per first end..... .....
2–Per end after first one..... .....

4Y320–11 Ground (emery wheel). **Rate**.....

Includes grinding track maul at emery wheel after same has been dressed.

1–Per first end..... .....
2–Per end after first one..... .....

4Y320–13 Made complete. **Rate**.....

Includes getting material, cutting to length, forging down, dressing, finishing and tempering track maul complete at forge.

1–Per first maul..... .....
2–Per maul after first one..... .....

4Y320–19a Tempered. **Rate**.....

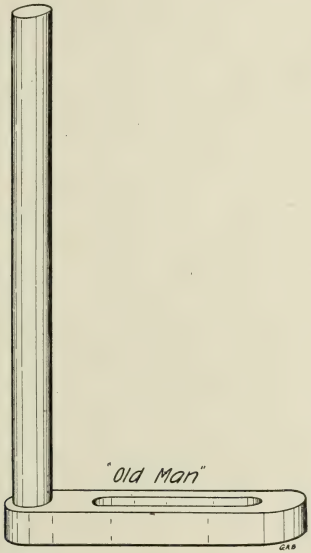
Includes tempering end of track maul complete at forge.

1–Per first end..... .....
2–Per end after first one..... .....

TOOLS

Maul, Track

OLD MAN



4Y330–13 Made complete. **Rate**.....

Includes getting material, forging out foot, getting round piece, doing necessary welding, dressing and finishing old man to shape complete.

Forge:
1–Per first old man..... .....
2–Per old man after first one..... .....

4Y330–18 Straightened. **Rate**.....

Includes straightening old man when same has become bent.

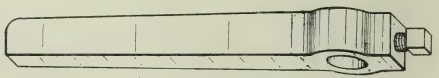
Forge:
1–Per first old man..... .....
2–Per old man after first one..... .....

4Y330–21 Welded (round piece). **Rate**.....

Includes getting round piece and welding same on foot of old man.

Forge:
1–Per first round piece..... .....
2–Per round piece after first one..... .....

OLD MAN'S ARM



4Y334–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing old man's arm to shape complete.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

4Y334–18 Straightened. **Rate**.....

Includes straightening old man's arm when same has become bent.

Forge:

1–Per first arm..... .....
2–Per arm after first one..... .....

TOOLS

Old Man's Arm

PICK, COAL



4Y340–6 Dressed. **Rate**.....

Includes dressing, finishing and tempering coal pick complete, after same has been forged.

Forge:

1–Per first pick..... .....
2–Per pick after first one..... .....

4Y340–6 Dressed (old). **Rate**.....

Includes redressing and tempering either end of old coal pick complete.

Forge:

7–Per first end..... .....
8–Per end after first one..... .....

4Y340–9 Forged. **Rate**.....

Includes getting material and forging out coal pick complete, ready for dressing.

Steam hammer:

1–Per first pick..... .....
2–Per pick after first one..... .....

Forge:

3–Per first pick..... .....
4–Per pick after first one..... .....

PICK, COAL

4Y340–13 Made complete. **Rate**.....

Includes getting material, forging, dressing, finishing and tempering coal pick complete.

Steam hammer:

1–Per first pick..... .....
2–Per pick after first one..... .....

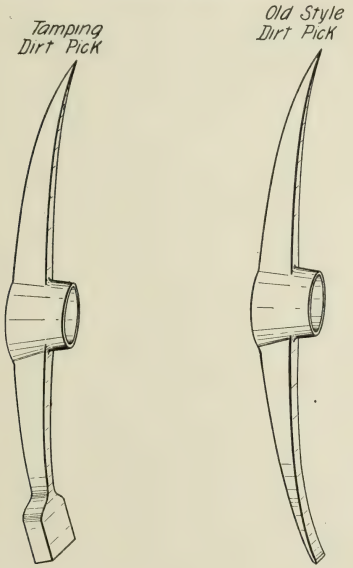
Forge:

3–Per first pick..... .....
4–Per pick after first one..... .....

TOOLS

Pick, Coal

PICK, DIRT—OLD STYLE OR TAMPING



4Y344–6 Dressed. **Rate**.....

Includes dressing and tempering old style or tamping dirt pick after same has been forged.

Forge:

1–Per first pick..... .....
2–Per pick after first one..... .....

4Y344–6 Dressed and tempered (old). **Rate**.....

Includes redressing and tempering either end of old tamping or old style dirt pick complete.

Forge:

7–Per first end..... .....
8–Per end after first one..... .....

PICK, DIRT—OLD STYLE OR TAMPING

4Y344–9 Forged. **Rate**.....

Includes getting material and forging out tamping or old style dirt pick complete, ready for dressing.

Steam hammer:

1–Per first pick..... .....
2–Per pick after first one..... .....

Forge:

3–Per first pick..... .....
4–Per pick after first one..... .....

4Y344–13 Made complete. **Rate**.....

Includes getting material, forging, dressing, finishing and tempering old style or tamping dirt pick complete.

Forge:

1–Per first pick..... .....
2–Per pick after first one..... .....

Forge:

3–Per first pick..... .....
4–Per pick after first one..... .....

TOOLS

Pick, Dirt—Old Style or Tamping

PIN, DRIFT—BLACKSMITH'S

Drift Pin



4Y350–6 Dressed. **Rate**.....

Includes dressing and finishing blacksmith's drift pin complete.

Forge:

1–Per first pin..... .....
2–Per pin after first one..... .....

4Y350–9 Forged. **Rate**.....

Includes getting material and forging blacksmith's drift pin complete, ready for dressing.

Steam hammer or forge:

1–Per first pin..... .....
2–Per pin after first one..... .....

4Y350–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing blacksmith's drift pin complete.

Forge or steam hammer:

1–Per first pin..... .....
2–Per pin after first one..... .....

PIN, DRIFT—BOILERMAKER'S

4Y352–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing boilermaker's drift pin complete.

Forge.

Per first pin:

1–Pin 1″ or less in diameter..... .....
2–Pin over 1″ in diameter..... .....

Per pin after first one:

3–Pin 1″ or less in diameter..... .....
4–Pin over 1″ in diameter..... .....

4Y352–18 Straightened. **Rate**.....

Includes straightening old boilermaker's drift pin when same has become bent.

Forge:

1–Per first pin..... .....
2–Per pin after first one..... .....

TOOLS

Pin, Drift—Boilermaker's

PUNCH, CENTER—MACHINIST'S

4Y360–13 Made. **Rate**.....

Includes getting material, cutting to length, dressing and finishing and tempering machinist's center punch complete.

Forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

4Y360–19a Tempered (old). **Rate**.....

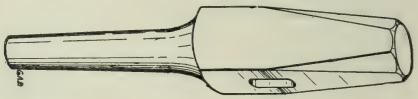
Includes retempering old machinist's center punch complete.

Forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

PUNCH, HANDLE—BLACKSMITH'S OR BOILERMAKER'S

Handle Punch for Ordinary Work



4Y364–6 Dressed (old). **Rate**.....

Includes straightening and dressing either end of old blacksmith's or boilermaker's handle punch complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4Y364–13 Made complete. **Rate**.....

Includes getting material, forging, dressing and finishing blacksmith's or boilermaker's handle punch complete.

Steam hammer or forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

4Y364–21 Welded (new end). **Rate**.....

Includes getting material and welding new end on old blacksmith's or boilermaker's handle punch, dressing and finishing to shape complete.

Forge:

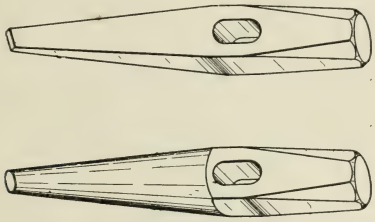
1–Per first end..... .....
2–Per end after first one..... .....

TOOLS

Punch, Handle—Blacksmith's or Boilermaker's

PUNCH, TRACK—ROUND OR SQUARE

Square and Round Handle Punch for Track Work



4Y370–6 Dressed, straightened and tempered. **Rate**.....

Includes dressing, straightening and tempering end of old round or square track punch.

Forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

4Y370–13 Made complete. **Rate**.....

Includes getting material, forging, dressing and tempering round or square track punch complete.

Steam hammer or forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

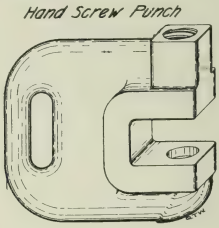
4Y370–21 Welded (new end). **Rate**.....

Includes getting material and welding new end on old round or square track punch, dressing, finishing and tempering end complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

PUNCH, SCREW—MACHINIST'S



4Y374–6 Dressed. **Rate**.....

Includes dressing and finishing machinist's screw punch complete, after same has been forged.

Forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

4Y374–9 Forged. **Rate**.....

Includes getting material, blocking out, forging and bending machinist's screw punch complete, ready for dressing.

Steam hammer or forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

4Y374–13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing machinist's screw punch complete.

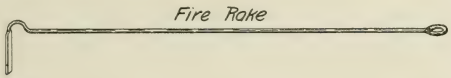
Steam hammer or forge:

1–Per first punch..... .....
2–Per punch after first one..... .....

TOOLS

Punch, Screw—Machinist's

RAKE, FIRE—BLACKSMITH'S



4Y380–13 Made. **Rate**.....

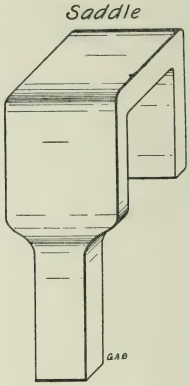
Includes getting material, forging, doing necessary welding, dressing and finishing fire rake complete.

Forge:

1–Per first rake..... .....

2–Per rake after first one..... .....

SADDLE, ANVIL—BLACKSMITH'S



4Y390–13 Made. **Rate**.....

Includes getting material, bending, dressing and finishing blacksmith's anvil saddle complete.

Forge:

1–Per first saddle..... .....
2–Per saddle after first one..... .....

TOOLS

Saddle, Anvil—Blacksmith's

SCRAPER, PAINTER'S

4Y396–6 Dressed (old). **Rate**.....

Includes redressing and tempering old painter's scraper complete.

Forge:

1–Per first scraper ....
2–Per scraper after first one ....

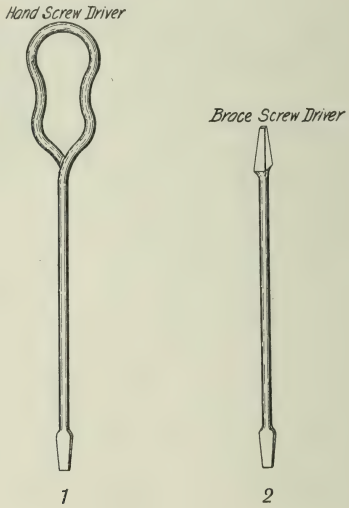
4Y396–13 Made (from old files). **Rate**.....

Includes getting old files, dressing painter's scraper to shape and tempering complete.

Forge:

1–Per first scraper ....
2–Per scraper after first one ....

SCREW-DRIVER



4Y400–13 Made. **Rate**.....

Includes getting material, cutting to length, dressing and finishing and tempering screw-driver complete.

Forge.

Per first screw-driver:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

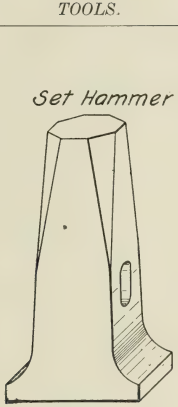
Per screw-driver after first one:

3–As per sketch No. 1..... .....
4–As per sketch No. 2..... .....

TOOLS

Screw-driver

SET HAMMER



4Y406–13 Made (from flatters). **Rate**.....

Includes getting flatters and forming round edge or rolling set hammer complete at steam hammer.

Steam hammer:

1–Per first set hammer..... .....
2–Per set hammer after first one..... .....

4Y406–13 Made (from new stock). **Rate**.....

Includes getting material, forging, dressing and finishing set hammer complete.

Forge:

1–Per first set hammer..... .....
2–Per set hammer after first one..... .....

SET, RIVET



4Y408–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing rivet set complete.

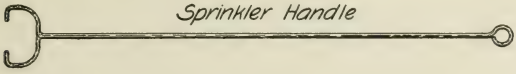
Forge:

1–Per first set..... .....
2–Per set after first one..... .....

TOOLS

Set, Rivet

SPRINKLER HANDLE—BLACKSMITH'S



4Y412–13 Made. **Rate**.....

Includes getting material, cutting to length, bending, dressing and finishing blacksmith's sprinkler handle complete.

Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

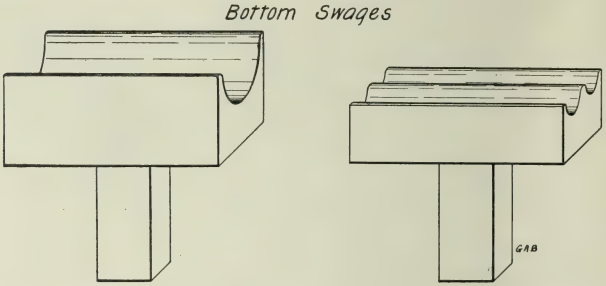
4Y412–21 Welded (handle end). **Rate**.....

Includes getting stock for new handle end for blacksmith's sprinkler handle, welding same on end of handle, bending, dressing and finishing complete.

Forge:

1–Per first handle end..... .....
2–Per handle end after first one..... .....

SWAGE, BOTTOM



4Y416–6 Dressed. **Rate**.....

Includes dressing and finishing bottom swage after same has been cut out and forged.

Forge:

1–Per first swage..... .....
2–Per swage after first one..... .....

4Y416–9 Forged. **Rate**.....

Includes getting material, blocking out and forging bottom swage complete, ready for dressing.

Steam hammer:

1–Per first swage..... .....
2–Per swage after first one..... .....

Forge:

3–Per first swage..... .....
4–Per swage after first one..... .....

4Y416–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing bottom swage complete.

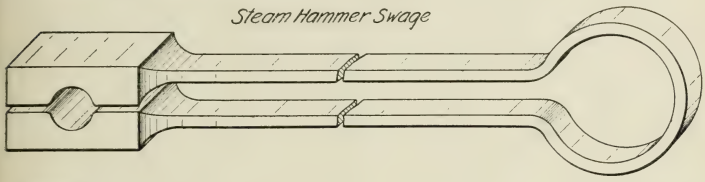
Forge:

1–Per first swage..... .....
2–Per swage after first one..... .....

TOOLS

Swage, Bottom

SWAGE, STEAM HAMMER



4Y420–6 Dressed. **Rate**.....

Includes making groove in swage, welding, bending and fitting swage to proper size.

Forge.

Per first swage:

1–Diam. of hole $2\frac{1}{4}''$ or less..... .....
2–Diam. of hole over $2\frac{1}{4}''$..... .....

Per swage after first one:

3–Diam. of hole $2\frac{1}{4}''$ or less..... .....
4–Diam. of hole over $2\frac{1}{4}''$..... .....

4Y420–9 Forged. **Rate**.....

Includes getting material and forging out steam hammer swage complete, ready for dressing.

Steam hammer or forge.

Per first swage:

1–Diam. of hole $2\frac{1}{4}''$ or less..... .....
2–Diam. of hole over $2\frac{1}{4}''$..... .....

Per swage after first one:

3–Diam. of hole $2\frac{1}{4}''$ or less..... .....
4–Diam. of hole over $2\frac{1}{4}''$..... .....

4Y420–9 Forged (one half of swage). **Rate**.....

Includes getting material and forging out one half of steam hammer swage complete, ready for dressing, and welding on other half.

Steam hammer or forge.

Per first half of swage:

11–Diam. of hole $2\frac{1}{4}''$ or less..... .....
12–Diam. of hole over $2\frac{1}{4}''$..... .....

Per half of swage after first one:

13–Diam. of hole $2\frac{1}{4}''$ or less..... .....
14–Diam. of hole over $2\frac{1}{4}''$..... .....

SWAGE, STEAM HAMMER

4Y420–13 Made complete. **Rate**.....

Includes getting material and forging steam hammer swage, making groove, bending and fitting swage to proper size complete.

Forge.

Per first swage:

1–Diam. of hole $2\frac{1}{4}''$ or less.....

2–Diam. of hole over $2\frac{1}{4}''$.....

Per swage after first one:

3–Diam. of hole $2\frac{1}{4}''$ or less.....

4–Diam. of hole over $2\frac{1}{4}''$.....

4Y420–21 Welded (break). **Rate**.....

Includes doing necessary scarfing, welding break in steam hammer swage, dressing and finishing over weld complete.

Forge.

Per first swage:

1–Diam. of hole $2\frac{1}{4}''$ or less.....

2–Diam. of hole over $2\frac{1}{4}''$.....

Per swage after first one:

3–Diam. of hole $2\frac{1}{4}''$ or less.....

4–Diam. of hole over $2\frac{1}{4}''$.....

4Y420–21 Welded (new half) (after same has been forged). **Rate**.....

Includes getting new half of steam hammer swage after half has been forged, doing necessary scarfing, welding half on swage, making groove, bending, dressing and finishing complete.

Forge.

Per first half:

11–Diam. of hole $2\frac{1}{4}''$ or less.....

12–Diam. of hole over $2\frac{1}{4}''$.....

Per half after first one:

13–Diam. of hole $2\frac{1}{4}''$ or less.....

14–Diam. of hole over $2\frac{1}{4}''$.....

4Y420–21 Welded (new half) (making included). **Rate**.....

Includes getting material, blocking out half of steam hammer swage, welding on old half, bending, dressing and finishing swage complete.

Forge.

Per first half of swage:

21–Diam. of hole $2\frac{1}{4}''$ or less.....

22–Diam. of hole over $2\frac{1}{4}''$.....

Per half after first one:

23–Diam. of hole $2\frac{1}{4}''$ or less.....

24–Diam. of hole over $2\frac{1}{4}''$.....

TOOLS

Swage, Steam Hammer

SWAGE, TOP

Top Swage



4Y424–6 Dressed. **Rate**.....

Includes getting top swage after same has been forged, punching handle hole, shaping groove, dressing and finishing top swage complete.

Forge.

Per first swage:

1–Diam. of groove 1″ or less..... .....
2–Diam. of groove over 1″ to 2″ incl..... .....
3–Diam. of groove over 2″..... .....

Per swage after first one:

4–Diam. of groove 1″ or less..... .....
5–Diam. of groove over 1″ to 2″ incl..... .....
6–Diam. of groove over 2″..... .....

4Y424–9 Forged. **Rate**.....

Includes getting material and forging top swage complete, ready for dressing. Does not include punching handle hole.

Steam hammer or forge:

1–Per first swage, all sizes..... .....
2–Per swage after first one, all sizes..... .....

SWAGE, TOP

4Y424–13 Made complete. **Rate**.....

Includes getting material, forging, shaping groove, punching handle hole, and finishing top swage complete.

Forge.

Per first swage:

1–Diam. of groove 1″ or less..... .....
2–Diam. of groove over 1″ to 2″ incl..... .....
3–Diam. of groove over 2″..... .....

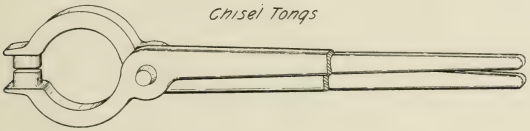
Per swage after first one:

4–Diam. of groove 1″ or less..... .....
5–Diam. of groove over 1″ to 2″ incl..... .....
6–Diam. of groove over 2″..... .....

TOOLS

Swage, Top

TONGS, CHISEL



4Y440–6 Dressed. **Rate**.....

Includes getting chisel tongs after same have been forged, bending, dressing, punching holes, riveting tongs together, and fitting to proper size.

Forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first one..... .....

4Y440–9 Forged. **Rate**.....

Includes blocking out both halves of chisel tongs and forging same to proper size, and shaping jaw complete, ready for dressing.

Steam hammer or forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first one..... .....

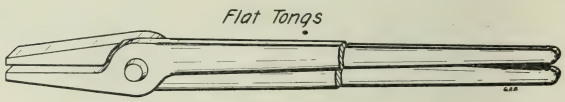
4Y440–13 Made complete. **Rate**.....

Includes getting material, forging, bending, punching hole, riveting tongs together, dressing fit and finishing complete.

Forge:

1–Per first pair of tongs, all sizes..... .....
2–Per pair of tongs after first pair, all sizes..... .....

TONGS, FLAT—BLACKSMITH'S



4Y444–6 Dressed. **Rate**.....

Includes getting blacksmith's flat tongs after same have been forged, bending, dressing, punching holes, riveting tongs together, and fitting to proper size.

Forge.

Per first pair of tongs:

1–Fit $\frac{3}{4}''$ wide or less.....
2–Fit over $\frac{3}{4}''$ to $1\frac{3}{4}''$ wide incl.....
3–Fit over $1\frac{3}{4}''$ wide.....

Per pair of tongs after first pair:

4–Fit $\frac{3}{4}''$ wide or less.....
5–Fit over $\frac{3}{4}''$ to $1\frac{3}{4}''$ wide incl.....
6–Fit over $1\frac{3}{4}''$ wide.....

4Y444–9 Forged. **Rate**.....

Includes blocking out both halves of blacksmith's flat tongs, forging same to proper size, and shaping jaw complete.

Steam hammer or forge.

Per first pair of tongs:

1–Fit $\frac{3}{4}''$ wide or less.....
2–Fit over $\frac{3}{4}''$ to $1\frac{3}{4}''$ wide incl.....
3–Fit over $1\frac{3}{4}''$ wide.....

Per pair of tongs after first pair:

4–Fit $\frac{3}{4}''$ wide or less.....
5–Fit over $\frac{3}{4}''$ to $1\frac{3}{4}''$ wide incl.....
6–Fit over $1\frac{3}{4}''$ wide.....

4Y444–13 Made. **Rate**.....

Includes getting material, forging, bending, punching hole, riveting tongs together, dressing fit and finishing complete.

Forge.

Per first pair of tongs:

1–Fit $\frac{3}{4}''$ wide or less.....
2–Fit over $\frac{3}{4}''$ to $1\frac{3}{4}''$ wide incl.....
3–Fit over $1\frac{3}{4}''$ wide.....

Per pair of tongs after first pair:

4–Fit $\frac{3}{4}''$ wide or less.....
5–Fit over $\frac{3}{4}''$ to $1\frac{3}{4}''$ wide incl.....
6–Fit over $1\frac{3}{4}''$ wide.....

TOOLS

Tongs, Flat—Blacksmith's

TONGS, FLAT—FURNACE

4Y446–6 Dressed. **Rate**.....

Includes getting furnace flat tongs after same have been forged, bending, dressing, punching hole, riveting together, and fitting to proper size complete.

Forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y446–9 Forged. **Rate**.....

Includes blocking out both halves of furnace flat tongs, forging same to proper size, and shaping jaw complete, ready for dressing.

Steam hammer or forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first one..... .....

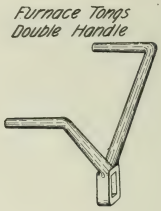
4Y446–13 Made. **Rate**.....

Includes getting material for furnace flat tongs, forging, bending, punching hole, riveting tongs together, dressing and finishing fit to proper size complete.

Forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first one..... .....

TONGS, FLAT—FURNACE—HANDLE



4Y450–13 Made. **Rate**.....

Includes getting material, bending, welding, dressing and finishing handle for furnace flat tongs complete.

Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

4Y450–19 Shrunk on tongs. **Rate**.....

Includes heating and shrinking handle on furnace flat tongs complete.

Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

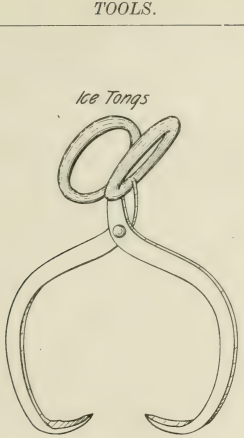
4Y450–21 Welded on tongs. **Rate**.....

Includes doing necessary scarfing and welding handle on furnace flat tongs, dressing and finishing complete.

Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

TONGS, ICE



4Y454–13 Made. **Rate**.....

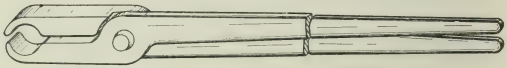
Includes getting material, forging, bending, punching, riveting and finishing ice tongs complete.

Forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first one..... .....

TONGS, LINK

Link Tongs



4Y464–6 Dressed. **Rate**.....

Includes getting link tongs after same have been forged, bending, dressing, punching holes, riveting tongs together, fitting to proper size.

Forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y464–9 Forged. **Rate**.....

Includes blocking out both halves of link tongs, forging same to proper shape, and shaping jaw complete.

Steam hammer:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

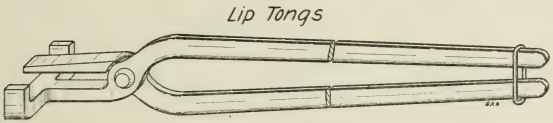
4Y464–13 Made. **Rate**.....

Includes getting material, forging, bending, punching hole, riveting tongs together, dressing fit and finishing complete.

Forge:

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

TONGS, LIP—BLACKSMITH'S



4Y468–6 Dressed. **Rate**.....

Includes getting blacksmith's lip tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

Per first pair of tongs:
1–Tongs with $1\frac{1}{4}$"x4" fit or less.....
2–Tongs with over $1\frac{1}{4}$"x4" fit.....

Per pair of tongs after first pair:
5–Tongs with $1\frac{1}{4}$"x4" fit or less.....
6–Tongs with over $1\frac{1}{4}$"x4" fit.....

4Y468–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of blacksmith's lip tongs, and shaping jaw complete, ready for dressing.

Per first pair of tongs:
1–Tongs with $1\frac{1}{4}$"x4" fit or less.....
2–Tongs with over $1\frac{1}{4}$"x4" fit.....

Per pair of tongs after first pair:
5–Tongs with $1\frac{1}{4}$"x4" fit or less.....
6–Tongs with over $1\frac{1}{4}$"x4" fit.....

4Y468–13 Made. **Rate**.....

Includes getting material and forging blacksmith's lip tongs, punching, riveting, dressing and finishing tongs to shape complete.

Per first pair of tongs:
1–Lip $1\frac{1}{4}$"x4" or less.....
2–Lip over $1\frac{1}{4}$"x4".....

Per pair of tongs after first pair:
5–Lip $1\frac{1}{4}$"x4" or less.....
6–Lip over $1\frac{1}{4}$"x4".....

TONGS, LIP—FURNACE

4Y470–6 Dressed. **Rate**.....

Includes getting furnace lip tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair after first pair of tongs..... .....

4Y470–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of furnace lip tongs, and shaping jaw complete, ready for dressing.

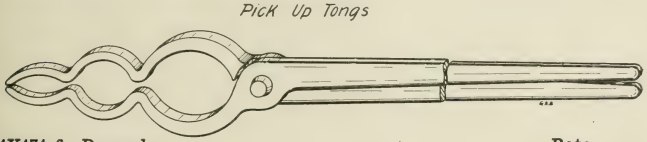
1–Per first pair of tongs..... .....
2–Per pair after first pair of tongs..... .....

4Y470–13 Made. **Rate**.....

Includes getting material, forging, furnace lip tongs to hold scrap or axle strap, punching, riveting, dressing or fitting tongs to shape complete.

1–Per first pair of tongs..... .....
2–Per pair after first pair of tongs..... .....

TONGS, PICK-UP—BLACKSMITH'S



4Y474–6 Dressed. **Rate**.....

Includes getting blacksmith's pick-up tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair after first pair of tongs..... .....

4Y474–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of blacksmith's pick-up tongs, and shaping jaw complete, ready for dressing.

1–Per first pair of tongs..... .....
2–Per pair after first pair of tongs..... .....

4Y474–13 Made. **Rate**.....

Includes getting material, forging blacksmith's pick-up tongs, punching, riveting and dressing tongs complete.

1–Per first pair of tongs, all sizes..... .....
2–Per pair of tongs after first pair, all sizes..... .....

TONGS, PICK-UP—FURNACE.

4Y476–6 Dressed. **Rate**.....

Includes getting furnace pick-up tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y476–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of furnace pick-up tongs, and shaping jaw complete, ready for dressing.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y476–13 Made. **Rate**.....

Includes getting material, forging furnace pick-up tongs, punching, riveting, dressing and finishing tongs complete.

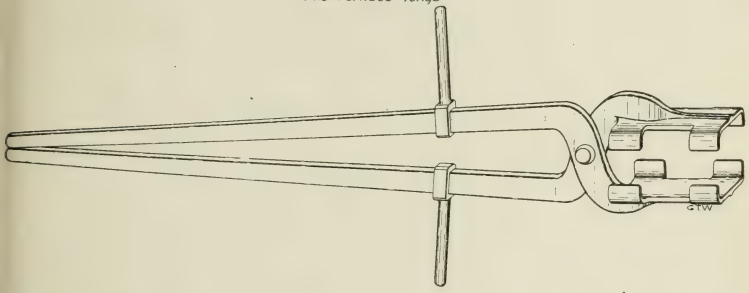
1–Per first pair of tongs, all sizes..... .....
2–Per pair of tongs after first pair, all sizes..... .....

TOOLS

Tongs, Pick-up—Furnace.

TONGS, PILE

Pile Furnace Tongs



4Y478–6 Dressed. **Rate**.....

Includes getting pile tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y478–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of pile tongs, and shaping jaw complete, ready for dressing.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y478–13 Made. **Rate**.....

Includes getting material, forging pile tongs for holding piles for frames, axles, driving shafts, etc., punching, dressing and finishing tongs complete.

1–Per first pair of tongs, all sizes..... .....
2–Per pair of tongs after first pair, all sizes..... .....

TONGS, RIVET



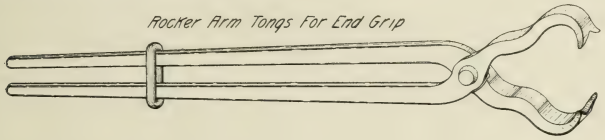
4Y490–13 Made. **Rate**.....

Includes getting material, forging, riveting tongs, punching, riveting, dressing and finishing tongs complete.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

TOOLS
Tongs, Rivet

TONGS, ROCKER ARM—END



4Y494–6 Dressed. **Rate**.....

Includes getting rocker arm tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair after first pair..... .....

4Y494–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of rocker arm end tongs, and shaping jaw complete, ready for dressing.

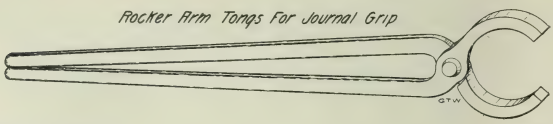
1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y494–13 Made. **Rate**.....

Includes getting material, forging rocker arm end tongs for holding piles for frames, axles, driving shafts, etc., punching, dressing and finishing tongs complete.

1–Per first pair of tongs, all sizes..... .....
2–Per pair after first pair of tongs..... .....

TONGS, ROCKER ARM—JOURNAL



4Y496–6 Dressed. **Rate**.....

Includes getting journal rocker arm tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y496–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of pile tongs, and shaping jaw complete, ready for dressing.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y496–13 Made. **Rate**.....

Includes getting material, forging rocker arm to old journal holding piles for frames, axles, driving shafts, etc., punching, dressing and finishing tongs complete.

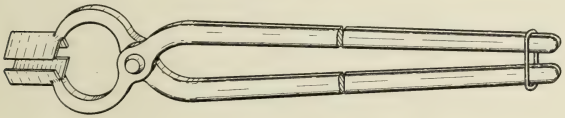
1–Per first pair of tongs, any size..... .....
2–Per pair of tongs after first pair, any size..... .....

TOOLS

Tongs, Rocker Arm—Journal

TONGS, ROUND OR SQUARE—BLACKSMITH'S

Square Tongs



4Y500–6 Dressed. **Rate**.....

Includes getting blacksmith's round or square tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

Per first pair of tongs:

1–Fit $1\frac{1}{4}$" or less..... .....
2–Fit over $1\frac{1}{4}$" to 3" inclusive..... .....
3–Fit over 3"..... .....

Per pair of tongs after first pair:

6–Fit $1\frac{1}{4}$" or less..... .....
7–Fit over $1\frac{1}{4}$" to 3" incl..... .....
8–Fit over 3"..... .....

4Y500–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of blacksmith's round or square tongs, and shaping jaw complete, ready for dressing.

1–Per first pair of tongs, all sizes..... .....
2–Per pair of tongs after first pair, all sizes..... .....

4Y500–13 Made. **Rate**.....

Includes getting material, forging blacksmith's round or square tongs for holding piles for frames, axles, driving shafts, etc., punching, dressing and finishing tongs complete.

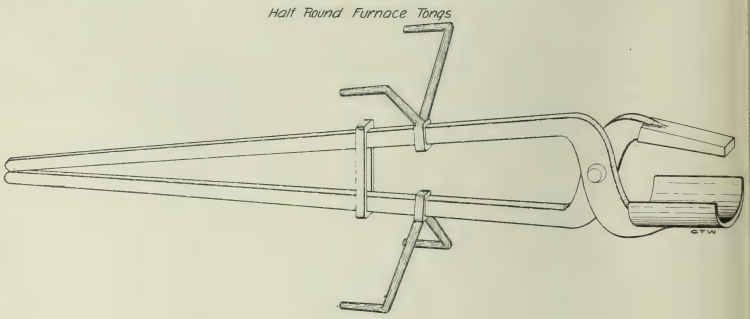
Per first pair of tongs:

1–Fit $1\frac{1}{4}$" or less..... .....
2–Fit over $1\frac{1}{4}$" to 3" inclusive..... .....
3–Fit over 3"..... .....

Per pair of tongs after first pair:

6–Fit $1\frac{1}{4}$" or less..... .....
7–Fit over $1\frac{1}{4}$" to 3" inclusive..... .....
8–Fit over 3"..... .....

TONGS, ROUND OR HALF-ROUND—FURNACE



4Y502–6 Dressed. **Rate**.....

Includes getting furnace round or half-round tongs after same have been forged, bending, dressing, punching, riveting together, and setting to proper shape complete.

1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y502–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of furnace round or half-round tongs for holding axles, driving shafts, and shaping jaw complete, ready for dressing.

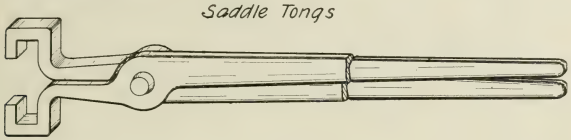
1–Per first pair of tongs..... .....
2–Per pair of tongs after first pair..... .....

4Y502–13 Made. **Rate**.....

Includes getting material, forging furnace round or half-round tongs for holding piles for frames, axles, driving shafts, etc., punching, dressing and finishing tongs complete.

1–Per first pair of tongs, all sizes..... .....
2–Per pair after first pair of tongs..... .....

TONGS, SADDLE



4Y510–6 Dressed. **Rate**.....

Includes getting saddle tongs after same have been forged, bending, dressing, punching, riveting together and setting to proper shape complete.

Per first pair of tongs:
1–Fit 4″ wide or less..... .....
2–Fit over 4″ wide..... .....

Per pair of tongs after first pair:
5–Fit 4″ wide or less..... .....
6–Fit over 4″ wide..... .....

4Y510–9 Forged. **Rate**.....

Includes getting material, blocking out both halves of saddle tongs, and shaping jaw complete, ready for dressing.

1–Per first pair of tongs, all sizes..... .....
2–Per pair of tongs after first pair..... .....

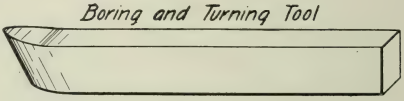
4Y510–13 Made. **Rate**.....

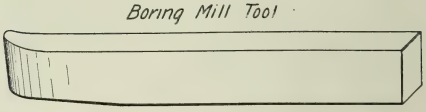
Includes getting material, forging saddle tongs for holding piles for frames, axles, driving shafts, etc., punching, dressing and finishing tongs complete.

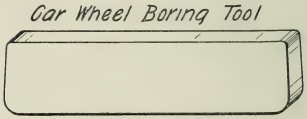
Per first pair of tongs:
1–Fit 4″ wide or less..... .....
2–Fit over 4″ wide..... .....

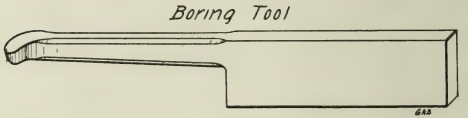
Per pair of tongs after first pair:
5–Fit 4″ or less..... .....
6–Fit over 4″ wide..... .....

TOOL, MISCELLANEOUS

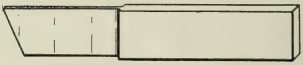






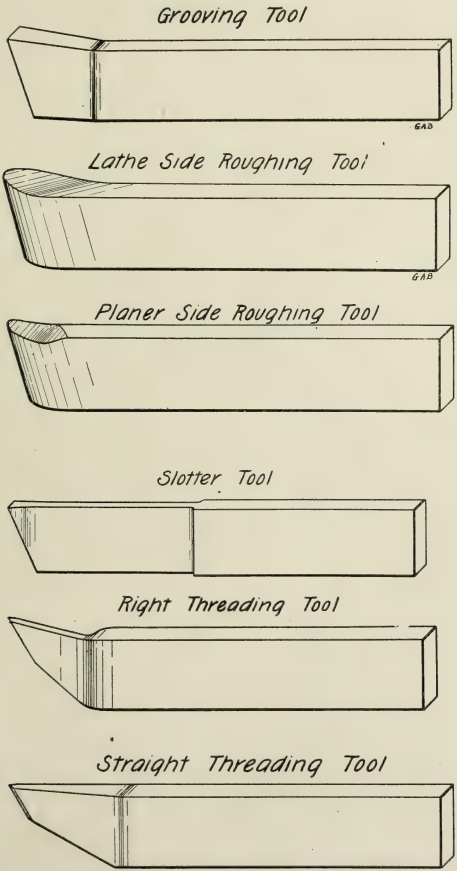






TOOLS
Tool, Miscellaneous

TOOL, MISCELLANEOUS



TOOLS
Tool, Miscellaneous

TOOL, MISCELLANEOUS

4Y530 Note.

The schedules below apply to the following tools.

Tool, Boring and Turning.
" Boring—Boring Mill.
" Boring—Car Wheel.
" Boring—Lathe.
" Boring—with Tool Holder.
" Cut off.
" Grooving.
" Side Roughing—Lathe.
" Side Roughing—Planer.
" Slotting.
" Threading—Right.
" Threading—Straight.

4Y530–6 Dressed (old). **Rate**.....

Includes redressing, tempering and finishing any one of the above tools complete.

Per tool:

1–Steel $\frac{1}{4}$" to $\frac{7}{16}$" square incl.....
2–Steel $\frac{1}{2}$" to $\frac{3}{4}$" square incl.....
3–Steel $\frac{1}{2}$"x1".....
4–Steel $\frac{5}{8}$"x1$\frac{1}{4}$".....
5–Steel $\frac{5}{8}$"x1$\frac{1}{2}$".....
6–Steel $\frac{3}{4}$"x1$\frac{1}{2}$".....
7–Steel $\frac{3}{4}$"x1$\frac{3}{4}$".....
8–Steel $\frac{7}{8}$"x1$\frac{1}{2}$".....
9–Steel 1" square.....
10–Steel 1" square.....
11–Steel 1"x1$\frac{1}{2}$".....
12–Steel 1"x1$\frac{3}{4}$".....
13–Steel 1"x2".....
14–Steel 1$\frac{1}{4}$" square.....
15–Steel 1$\frac{1}{4}$"x2".....
16–Steel 1$\frac{1}{2}$"x2".....
17–Steel 1$\frac{1}{4}$"x2$\frac{1}{4}$".....
18–Steel 1$\frac{1}{2}$"x2$\frac{1}{2}$".....

TOOL, MISCELLANEOUS

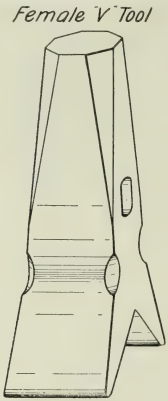
4Y530–13 Made. **Rate**.....

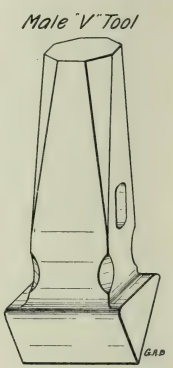
Making any one of the above tools; includes getting material, laying off, cutting steel, stamping, forging, dressing and tempering tool complete.

Per tool:

1–Steel $\frac{1}{4}$″ to $\frac{7}{16}$″ square incl.....
2–Steel $\frac{1}{2}$″ to $\frac{3}{4}$″ square incl.....
3–Steel $\frac{1}{2}$″x1″.....
4–Steel $\frac{5}{8}$″x1$\frac{1}{4}$″.....
5–Steel $\frac{5}{8}$″x1$\frac{1}{2}$″.....
6–Steel $\frac{3}{4}$″x1$\frac{1}{2}$″.....
7–Steel $\frac{3}{4}$″x1$\frac{3}{4}$″.....
8–Steel $\frac{7}{8}$″x1$\frac{1}{2}$″.....
9–Steel 1″ square.....
10–Steel 1″ round.....
11–Steel 1″x1$\frac{1}{2}$″.....
12–Steel 1″x1$\frac{3}{4}$″.....
13–Steel 1″x2″.....
14–Steel 1$\frac{1}{4}$″ square.....
15–Steel 1$\frac{1}{4}$″x2″.....
16–Steel 1$\frac{1}{2}$″x2″.....
17–Steel 1$\frac{1}{2}$″x2$\frac{1}{4}$″.....
18–Steel 1$\frac{1}{2}$″x2$\frac{1}{2}$″.....

TOOL, V—MALE OR FEMALE



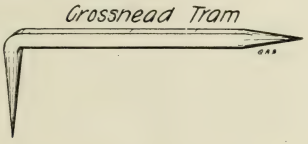


4Y540–13 Made. **Rate**.....

Includes getting material, forging, dressing and finishing male or female V tool complete.

1–Per first tool..... .....
2–Per tool after first one..... .....

TRAM, CROSSHEAD



4Y550–13 Made. **Rate**.....

Includes getting material, cutting to length, bending, dressing and tempering crosshead tram complete.

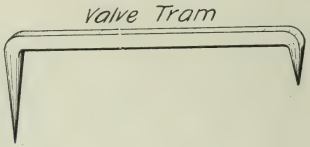
1–Per first tram..... .....
2–Per tram after first one..... .....

4Y550–19a Tempered (old). **Rate**.....

Includes retempering point of old crosshead tram.

1–Per first point..... .....
2–Per point after first one..... .....

TRAM, VALVE



4Y554–13 Made. **Rate**.....

Includes getting material, cutting to length, bending, dressing and tempering valve tram complete.

1–Per first tram..... .....
2–Per tram after first one..... .....

4Y554–19a Tempered (old). **Rate**.....

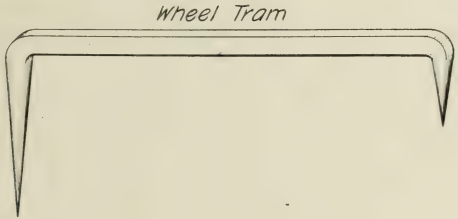
Includes retempering point of old valve tram.

1–Per first point..... .....
2–Per point after first one..... .....

TOOLS

Tram, Valve

TRAM, WHEEL



4Y558-13 Made. **Rate**.....

Includes getting material, cutting to length, bending, dressing and tempering wheel tram complete.

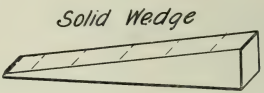
1–Per first tram..... .....
2–Per tram after first one..... .....

4Y558-19a Tempered (old). **Rate**.....

Includes retempering point of old wheel tram.

1–Per first point..... .....
2–Per point after first one..... .....

WEDGE, SOLID



4Y562–13 Made. **Rate**.....

Includes getting material, forging and dressing solid wedge complete.

Steam hammer or forge:

1–Per first wedge..... .....
2–Per wedge after first one..... .....

4Y562–18 Straightened. **Rate**.....

Includes straightening old solid wedge when same has become bent.

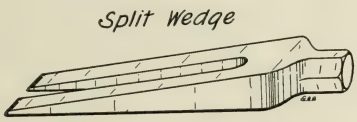
Forge:

1–Per first wedge..... .....
2–Per wedge after first one..... .....

TOOLS

Wedge, Solid

WEDGE, SPLIT



4Y564–6 Dressed. **Rate**.....

Includes cutting, slotting, dressing and finishing split wedge complete.

Forge:

1–Per first wedge..... .....
2–Per wedge after first one..... .....

4Y564–9 Forged. **Rate**.....

Includes getting material, forging split wedge complete, ready for dressing.

Steam hammer or forge:

1–Per first wedge..... .....
2–Per wedge after first one..... .....

4Y564–13 Made. **Rate**.....

Includes getting material, forging, cutting, slotting, dressing and finishing split wedge complete.

Forge:

1–Per first wedge..... .....
2–Per wedge after first one..... .....

4Y564–18 Straightened. **Rate**.....

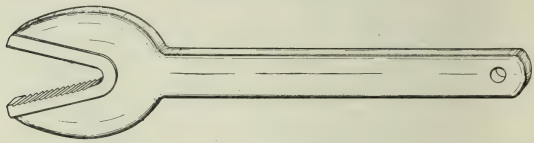
Includes straightening old split wedge complete.

Forge:

1–Per first wedge..... .....
2–Per wedge after first one..... .....

WRENCH, ALLIGATOR

Alligator Wrench



4Y580–0 Annealed. **Rate**.....

Includes annealing alligator wrench complete at forge.

Forge:
1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y580–6 Dressed. **Rate**.....

Includes cutting jaw, dressing and finishing alligator wrench complete, after same has been forged.

Forge.
Per first wrench:
1–Wrench 18″ long or less..... .....
2–Wrench over 18″ long..... .....
Per wrench after first one:
5–Wrench 18″ long or less..... .....
6–Wrench over 18″ long..... .....

4Y580–6 Dressed (old). **Rate**.....

Includes cutting ends of jaws of old alligator wrench, redressing jaws, and finishing wrench complete.

Forge:
1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y580–9 Forged. **Rate**.....

Includes getting material, cutting and forging alligator wrench complete, ready for dressing.

Steam hammer or forge.
Per first wrench:
1–Wrench 18″ long or less..... .....
2–Wrench over 18″ long..... .....
Per wrench after first one:
5–Wrench 18″ long or less..... .....
6–Wrench over 18″ long..... .....

TOOLS

Wrench, Alligator

WRENCH, ALLIGATOR

4Y580–13 Made. **Rate**.....

Includes getting material, forging, cutting jaw, dressing and finishing alligator wrench complete.

Per first wrench:

1–Wrench 18″ long or less..... .....
2–Wrench over 18″ long..... .....

Per wrench after first one:

5–Wrench 18″ long or less..... .....
6–Wrench over 18″ long..... .....

4Y580–18 Straightened. **Rate**.....

Includes straightening old alligator wrench when same has become bent.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

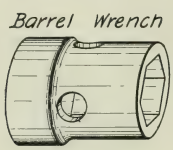
4Y580–19a Tempered. **Rate**.....

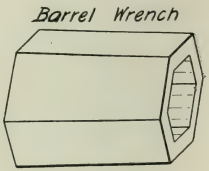
Includes tempering old or new alligator wrench complete at forge.

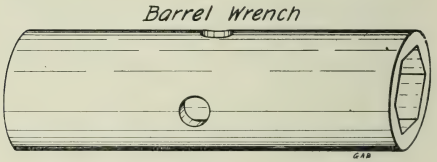
Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

WRENCH, BARREL







4Y584–6 Dressed (old). **Rate**.....

Includes redressing and refitting old barrel wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y584–13 Made from tubing. **Rate**.....

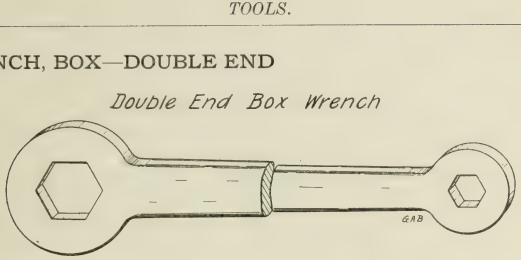
Includes getting steel tubing, cutting to length, forging, dressing and finishing barrel wrench complete, as per sketches Nos. 1, 2, and 3.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

TOOLS

Wrench, Barrel

WRENCH, BOX—DOUBLE END



4Y588–6 Dressed. **Rate**.....

Includes cutting double end, bending, dressing and finishing box wrench complete.

Per first wrench:
1–Wrench 24″ long or less.....
2–Wrench over 24″.....

Per wrench after first one:
5–Wrench 24″ long or less.....
6–Wrench over 24″.....

4Y588–9 Forged. **Rate**.....

Includes getting material, forging out double end box wrench complete, ready for dressing.

Steam hammer or forge:
Per first wrench:
1–Wrench 24″ long or less.....
2–Wrench over 24″.....

Per wrench after first one:
5–Wrench 24″ long or less.....
6–Wrench over 24″.....

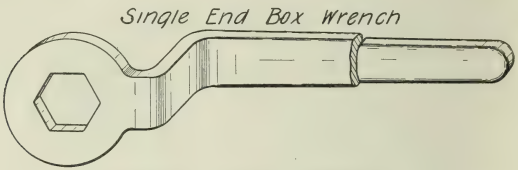
4Y588–13 Made (complete). **Rate**.....

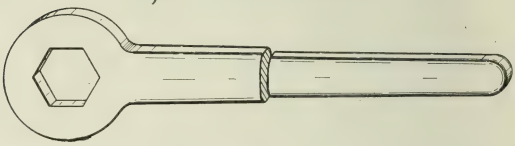
Includes getting material, forging, cutting out nut fit, bending, dressing and finishing double end box wrench complete.

Per first wrench:
1–Wrench 24″ long or less.....
2–Wrench over 24″.....

Per wrench after first one:
5–Wrench 24″ long or less.....
6–Wrench over 24″.....

WRENCH, BOX—SINGLE END





4Y592–6 Dressed. **Rate**.....

Includes cutting single end, bending, dressing and finishing box wrench complete.

Per first wrench:

1–For nut $1\frac{1}{4}''$ or less.....

2–For nut over $1\frac{1}{4}''$.....

Per wrench after first one:

5–For nut $1\frac{1}{4}''$ or less.....

6–For nut over $1\frac{1}{4}''$.....

4Y592–9 Forged. **Rate**.....

Includes getting material, forging out single end box wrench complete, ready for dressing.

Steam hammer or forge.

Per first wrench:

1–For nut $1\frac{1}{4}''$ or less.....

2–For nut over $1\frac{1}{4}''$.....

Per wrench after first one:

5–For nut $1\frac{1}{4}''$ or less.....

6–For nut over $1\frac{1}{4}''$.....

TOOLS

Wrench, Box—Single End

WRENCH, BOX—SINGLE END

4Y592-13 Made. **Rate**.....

Includes getting material, forging, cutting out nut fit, bending, dressing and finishing single end box wrench complete.

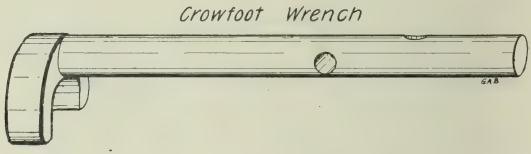
Per first wrench:

1–For nut $1\frac{1}{4}''$ or less..... .....
2–For nut over $1\frac{1}{4}''$..... .....

Per wrench after first one:

5–For nut $1\frac{1}{4}''$ or less..... .....
6–For nut over $1\frac{1}{4}''$..... .....

WRENCH, CROWFOOT



4Y596–3 Closed. **Rate**.....

Includes closing and dressing nut fit on old crowfoot wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y596–6 Dressed. **Rate**.....

Includes dressing and finishing crowfoot wrench, dressing nut fit, and finishing complete.

Forge.

Per first wrench:

1–For $1\frac{1}{4}''$ nut or less..... .....
2–For over $1\frac{1}{4}''$ nut..... .....

Per wrench after first one:

5–For $1\frac{1}{4}''$ nut or less..... .....
6–For over $1\frac{1}{4}''$ nut..... .....

4Y596–9 Forged. **Rate**.....

Includes getting material and forging crowfoot wrench complete, ready for dressing.

Steam hammer or forge.

Per first wrench:

1–For $1\frac{1}{4}''$ nut or less..... .....
2–For over $1\frac{1}{4}''$ nut..... .....

Per wrench after first one:

5–For $1\frac{1}{4}''$ nut or less..... .....
6–For over $1\frac{1}{4}''$ nut..... .....

TOOLS

Wrench, Crowfoot

WRENCH, CROWFOOT

4Y596–13 Made. **Rate**.....

Includes getting material, forging, welding, dressing and finishing crowfoot wrench to shape complete.

Forge.

Per first wrench:

1–For $1\frac{1}{4}''$ nut or less..... .....
2–For over $1\frac{1}{4}''$ nut..... .....

Per wrench after first one:

5–For $1\frac{1}{4}''$ nut or less..... .....
6–For over $1\frac{1}{4}''$ nut..... .....

4Y596–18 Straightened. **Rate**.....

Includes straightening old crowfoot wrench when same has become bent.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

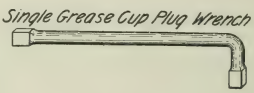
4Y596–21 Welded (handle). **Rate**.....

Includes getting material, welding new handle on old crowfoot wrench, punching holes, dressing and finishing wrench complete.

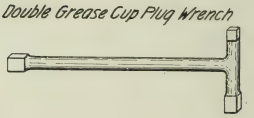
Forge:

1–Per first handle..... .....
2–Per handle after first one..... .....

WRENCH, GREASE CUP PLUG



1



2

4Y600–2 Bent. **Rate**.....

Includes bending grease cup plug wrench complete, after ends of wrench have been upset.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y600–4 Cut—steel. **Rate**.....

Includes cutting steel at power shears for grease cup plug wrench.

1–Per piece cut..... .....

4Y600–11 Ground. **Rate**.....

Includes grinding ends of grease cup plug wrench complete, at emery wheel.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y600–13 Made (complete). **Rate**.....

Includes getting material, forging grease cup plug wrench, making ends, doing necessary welding, dressing and finishing wrench complete.

Per first wrench:
1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per wrench after first one:
5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

TOOLS

Wrench, Grease Cup Plug

WRENCH, GREASE CUP PLUG

4Y600–18 Straightened. **Rate**.....

Includes straightening old grease cup plug wrench complete.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y600–20a Upset. **Rate**.....

Includes changing dies in forge, making and upsetting ends of grease cup plug wrench complete.

1–Per first end..... .....
2–Per wrench after first one..... .....

WRENCH, HYDRANT—HOBO



4Y604–13 Made. **Rate**.....

Includes getting material, forging, bending, dressing and finishing hobo hydrant wrench.

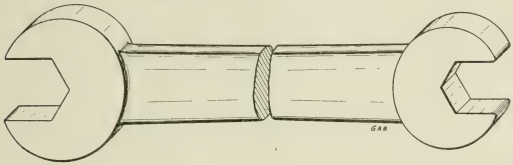
1–Per first wrench..... .....
2–Per wrench after first one..... .....

TOOLS

Wrench, Hydrant—Hobo

WRENCH, OPEN-END—DOUBLE

Double Open End Wrench



4Y610-3 Closed. **Rate**.....

Includes closing and refitting old double open-end wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y610-6 Dressed. **Rate**.....

Includes cutting nut fits and dressing and finishing double open-end wrench complete.

Forge.

Per first wrench:

1–For $\frac{7}{8}$″ nut or less..... .....
2–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl..... .....
3–For nut over $1\frac{1}{4}$″ to 2″ incl..... .....
4–For nut over 2″ to 4″ incl..... .....

Per wrench after first one:

9–For $\frac{7}{8}$″ nut or less..... .....
10–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl..... .....
11–For nut over $1\frac{1}{4}$″ to 2″ incl..... .....
12–For nut over 2″ to 4″ incl..... .....

4Y610-9 Forged. **Rate**.....

Includes getting material and forging out double open-end wrench complete, ready for dressing.

Steam hammer or forge:

Per first wrench:

1–For $\frac{7}{8}$″ nut or less..... .....
2–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl..... .....
3–For nut over $1\frac{1}{4}$″ to 2″ incl..... .....
4–For nut over 2″ to 4″ incl..... .....

Per wrench after first one:

9–For $\frac{7}{8}$″ nut or less..... .....
10–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl..... .....
11–For nut over $1\frac{1}{4}$″ to 2″ incl..... .....
12–For nut over 2″ to 4″ incl..... .....

WRENCH, OPEN-END—DOUBLE

4Y610–13 Made. **Rate**

Includes getting material, forging out double open-end wrench, punching and cutting nut fit, fitting to proper size, dressing and finishing wrench complete.

Forge.

Per first wrench:

1–For $\frac{7}{8}$″ nut or less
2–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl
3–For nut over $1\frac{1}{4}$″ to 2″ incl
4–For nut over 2″ to 4″ incl

Per wrench after first one:

9–For $\frac{7}{8}$″ nut or less
10–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl
11–For nut over $1\frac{1}{4}$″ to 2″ incl
12–For nut over 2″ to 4″ incl

4Y610–18 Straightened. **Rate**

Includes straightening old double open-end wrench when same has become bent.

1–Per first wrench
2–Per wrench after first one

4Y610–21 Weld (handle). **Rate**

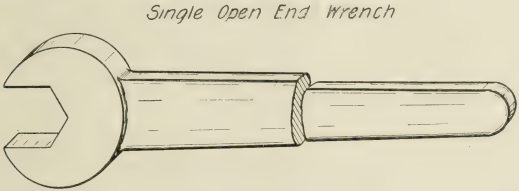
Includes making weld in handle of old double open-end wrench.

1–Per first weld
2–Per weld after first one

TOOLS

Wrench, Open-end—Double

WRENCH, OPEN-END—SINGLE



4Y612–3 Closed. **Rate**.....

Includes closing and refitting old single open-end wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y612–6 Dressed. **Rate**.....

Includes cutting nut fit, dressing and finishing single open-end wrench complete.

Forge.

Per first wrench:

1–For $\frac{7}{8}''$ nut or less..... .....
2–For nut over $\frac{7}{8}''$ to $1\frac{1}{4}''$ incl..... .....
3–For nut over $1\frac{1}{4}''$ to $2''$ incl..... .....
4–For nut over $2''$ to $4''$ incl..... .....
5–For nut over $4''$ to $5''$ incl..... .....
6–For nut over $5''$..... .....

Per wrench after first one:

9–For nut $\frac{7}{8}''$ or less..... .....
10–For nut over $\frac{7}{8}''$ to $1\frac{1}{4}''$ incl..... .....
11–For nut over $1\frac{1}{4}''$ to $2''$ incl..... .....
12–For nut over $2''$ to $4''$ incl..... .....
13–For nut over $4''$ to $5''$ incl..... .....
14–For nut over $5''$..... .....

4Y612–9 Forged. **Rate**.....

Includes getting material and forging out single open-end wrench complete, ready for dressing.

Steam hammer or forge.

Per first wrench:

1–For $\frac{7}{8}''$ nut or less..... .....
2–For nut over $\frac{7}{8}''$ to $1\frac{1}{4}''$ incl..... .....
3–For nut over $1\frac{1}{4}''$ to $2''$ incl..... .....
4–For nut over $2''$ to $4''$ incl..... .....
5–For nut over $4''$ to $5''$ incl..... .....
6–For nut over $5''$..... .....

WRENCH, OPEN-END—SINGLE

Per wrench after first one:

9–For $\frac{7}{8}$″ nut or less.....
10–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl.....
11–For nut over $1\frac{1}{4}$″ to 2″ incl.....
12–For nut over 2″ to 4″ incl.....
13–For nut over 4″ to 5″ incl.....
14–For nut over 5″.....

4Y612–13 Made. **Rate**.....

Includes getting material, forging single open-end wrench, punching out nut fit, dressing same to size, and finishing wrench complete.

Forge.

Per first wrench:

1–For $\frac{7}{8}$″ nut or less.....
2–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl.....
3–For nut over $1\frac{1}{4}$″ to 2″ incl.....
4–For nut over 2″ to 4″ incl.....
5–For nut over 4″ to 5″ incl.....
6–For nut over 5″.....

Per wrench after first one:

9–For $\frac{7}{8}$″ nut or less.....
10–For nut over $\frac{7}{8}$″ to $1\frac{1}{4}$″ incl.....
11–For nut over $1\frac{1}{4}$″ to 2″ incl.....
12–For nut over 2″ to 4″ incl.....
13–For nut over 4″ to 5″ incl.....
14–For nut over 5″.....

4Y612–18 Straightened. **Rate**.....

Includes straightening old single open-end wrench when same has become bent.

1–Per first wrench.....
2–Per wrench after first one.....

4Y612–21 Weld (handle). **Rate**.....

Includes making weld in handle of old single open-end wrench.

1–Per first weld.....
2–Per weld after first one.....

TOOLS

Wrench, Open-end—Single

WRENCH, S—CAR REPAIRER'S

Car Repairer's "S" Wrench



4Y616–2 Closed. **Rate**.....

Includes closing end of car repairer's wrench to fit different nuts, dressing and finishing end complete.

Forge:

1–Per first end..... .....
2–Per end after first one..... .....

4Y616–6 Dressed. **Rate**.....

Includes dressing car repairer's S wrench after same has been forged.

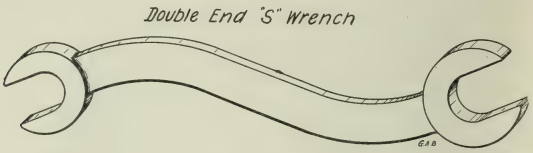
1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y616–13 Made (at bulldozer). **Rate**.....

Includes changing dies in bulldozer, heating old spring leaves, punching out wrench, stamping, straightening and finishing car repairer's S wrench complete.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

WRENCH, S—DOUBLE-END



4Y620–3 Closed. **Rate**.....

Includes closing end of S wrench and dressing to fit nut complete.

1–Per first end..... .....
2–Per end after first one..... .....

4Y620–6 Dressed. **Rate**.....

Includes cutting out nut fit, dressing and finishing double-end S wrench complete, after same has been forged.

Forge.

Per first wrench:

1–For nut $\frac{1}{2}''$ or less..... .....
2–For nut over $\frac{1}{2}''$ to $\frac{7}{8}''$ incl..... .....
3–For nut over $\frac{7}{8}''$ to $1\frac{3}{8}''$ incl..... .....
4–For nut over $1\frac{3}{8}''$ to $1\frac{3}{4}''$ incl..... .....
5–For nut over $1\frac{3}{4}''$..... .....

Per wrench after first one:

9–For nut $\frac{1}{2}''$ or less..... .....
10–For nut over $\frac{1}{2}''$ to $\frac{7}{8}''$ incl..... .....
11–For nut over $\frac{7}{8}''$ to $1\frac{3}{8}''$ incl..... .....
12–For nut over $1\frac{3}{8}''$ to $1\frac{3}{4}''$ incl..... .....
13–For nut over $1\frac{3}{4}''$..... .....

4Y620–9 Forged. **Rate**.....

Includes getting material and forging and bending S wrench complete, ready for dressing.

Steam hammer or forge.

Per first wrench:

1–For nut $\frac{1}{2}''$ or less..... .....
2–For nut over $\frac{1}{2}''$ to $\frac{7}{8}''$ incl..... .....
3–For nut over $\frac{7}{8}''$ to $1\frac{3}{8}''$ incl..... .....
4–For nut over $1\frac{3}{8}''$ to $1\frac{3}{4}''$ incl..... .....
5–For nut over $1\frac{3}{4}''$..... .....

Per end after first one:

9–For nut $\frac{1}{2}''$ or less..... .....
10–For nut over $\frac{1}{2}''$ to $\frac{7}{8}''$ incl..... .....
11–For nut over $\frac{7}{8}''$ to $1\frac{3}{8}''$ incl..... .....
12–For nut over $1\frac{3}{8}''$ to $1\frac{3}{4}''$ incl..... .....
13–For nut over $1\frac{3}{4}''$..... .....

TOOLS

Wrench, S—Double-end

WRENCH, S—DOUBLE-END

4Y620–13 Made. **Rate**.....

Includes getting material, forging S wrench, bending, punching and cutting out ends, fitting to proper size nut, dressing and finishing complete.

Forge.

Per first wrench:

1–For nut $\frac{1}{2}''$ or less..... .....
2–For nut over $\frac{1}{2}''$ to $\frac{7}{8}''$ incl..... .....
3–For nut over $\frac{7}{8}''$ to $1\frac{3}{8}''$ incl..... .....
4–For nut over $1\frac{3}{8}''$ to $1\frac{3}{4}''$ incl..... .....
5–For nut over $1\frac{3}{4}''$..... .....

Per wrench after first one:

9–For nut $\frac{1}{2}''$ or less..... .....
10–For nut over $\frac{1}{2}''$ to $\frac{7}{8}''$ incl..... .....
11–For nut over $\frac{7}{8}''$ to $1\frac{3}{8}''$ incl..... .....
12–For nut over $1\frac{3}{8}''$ to $1\frac{3}{4}''$ incl..... .....
13–For nut over $1\frac{3}{4}''$..... .....

4Y620–18 Straightened. **Rate**.....

Includes straightening old S wrench complete:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y620–21 Weld (handle). **Rate**.....

Includes making weld in handle of old S wrench complete.

1–Per first weld..... .....
2–Per weld after first one..... .....

WRENCH, SET-SCREW—GOOSENECK

4Y624–9 Forged (handles). **Rate**.....

Includes forging down handles of gooseneck set-screw wrench at steam hammer, and bending complete, after wrench has been upset at machine.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y624–20a Upset at forging machine. **Rate**.....

Includes changing dies in forging machine and upsetting gooseneck set-screw wrench complete.

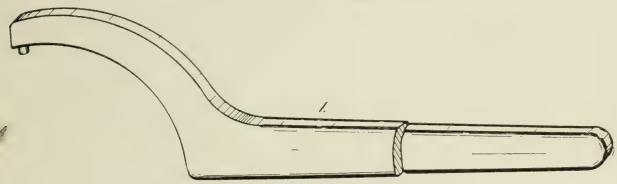
1–Per first wrench..... .....
2–Per wrench after first one..... .....

TOOLS

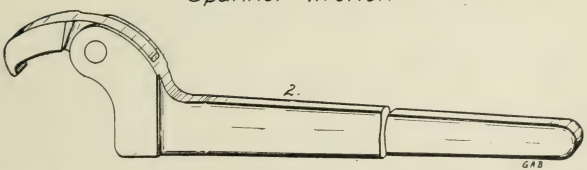
Wrench, Set-Screw—Gooseneck

WRENCH, SPANNER

Spanner Wrench



Spanner Wrench



4Y628–6 Dressed. **Rate**.....

Includes bending, dressing and finishing spanner wrench complete, after same has been forged.

Per first wrench:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per wrench after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4Y628–9 Forged. **Rate**.....

Includes getting material and forging out handle and hook of spanner wrench complete, ready for dressing.

Steam hammer or forge.

Per first wrench:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per wrench after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

WRENCH, SPANNER

4Y628–13 Made complete. **Rate**.....

Includes getting material, forging out wrench and handle of spanner wrench, bending, dressing and finishing complete.

Per first wrench:

1–As per sketch No. 1..... .....
2–As per sketch No. 2..... .....

Per wrench after first one:

5–As per sketch No. 1..... .....
6–As per sketch No. 2..... .....

4Y628–13 Made (hook only). **Rate**.....

Includes getting material, forging, bending and dressing hook end only of spanner wrench, as per sketch No. 2.

Forge:

10–Per first end..... .....
11–Per end after first one..... .....

4Y628–18 Straightened. **Rate**.....

Includes straightening old spanner wrench complete.

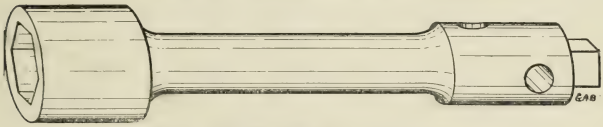
1–Per first wrench..... .....
2–Per wrench after first one..... .....

TOOLS

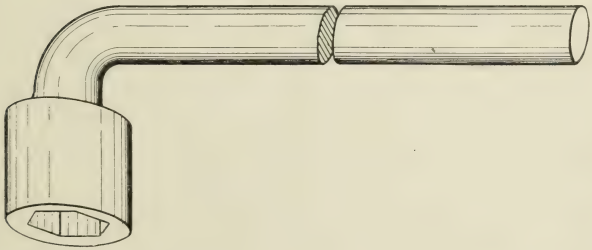
Wrench, Spanner

WRENCH, SOCKET—STRAIGHT OR GOOSENECK

Straight Socket Wrench



Goose Neck Socket Wrench



4Y634–3 Closed and refitted. **Rate**.....

Includes closing and refitting straight or gooseneck socket wrench nut fit complete.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y634–6 Dressed. **Rate**.....

Includes punching holes, dressing and finishing straight or gooseneck socket wrench complete, after same has been forged.

Per first wrench:
1–For nut $1\frac{1}{4}''$ or less..... .....
2–For nut over $1\frac{1}{4}''$..... .....

Per wrench after first one:
5–For nut $1\frac{1}{4}''$ or less..... .....
6–For nut over $1\frac{1}{4}''$..... .....

WRENCH, SOCKET—STRAIGHT OR GOOSENECK

4Y634–9 Forged (solid). **Rate**.....

Includes getting material and forging out solid straight or gooseneck socket wrench complete, ready for dressing.

Steam hammer or forge.

Per first wrench:

1–For nut $1\frac{1}{4}$" or less.....

2–For nut over $1\frac{1}{4}$".....

Per wrench after first one:

5–For nut $1\frac{1}{4}$" or less.....

6–For nut over $1\frac{1}{4}$".....

4Y634–13 Made complete. **Rate**.....

Includes getting material and making band, welding band on handle, fitting socket to proper size, squaring top end, bending handle if necessary, and finishing straight or gooseneck socket wrench complete.

Per first wrench:

1–For nut $1\frac{1}{4}$" or less.....

2–For nut over $1\frac{1}{4}$".....

Per wrench after first one:

5–For nut $1\frac{1}{4}$" or less.....

6–For nut over $1\frac{1}{4}$".....

4Y634–18 Straightened. **Rate**.....

Includes straightening old straight or gooseneck socket wrench.

1–Per first wrench.....

2–Per wrench after first one.....

4Y634–21 Welded (handle). **Rate**.....

Includes getting material, making handle for socket wrench and welding handle on wrench, bending and finishing complete.

1–Per first handle.....

2–Per handle after first one.....

TOOLS

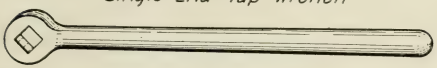
Wrench, Socket—Straight or Gooseneck

WRENCH, TAP—DOUBLE- OR SINGLE-END

Double End Tap Wrench



Single End Tap Wrench



4Y642–3 Closed. **Rate**.....

Includes closing tap fit in tap wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y642–6 Dressed. **Rate**.....

Includes punching holes, squaring, dressing and finishing double- or single-end tap wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y642–9 Forged. **Rate**.....

Includes getting material and forging out double- or single-end tap wrench complete, ready for dressing.

Forge.

Double-end wrench:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

Single-end wrench:

3–Per first wrench..... .....
4–Per wrench after first one..... .....

4Y642–13 Made. **Rate**.....

Includes getting material for double- or single-end tap wrench, forging, punching holes, dressing and finishing wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

WRENCH, TAP—DOUBLE- OR SINGLE-END

4Y642–18 Straightened. **Rate**.....

Includes straightening old tap wrench complete.

Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y642–21 Welded (handle). **Rate**.....

Includes getting material and welding handle on old double-end tap wrench complete.

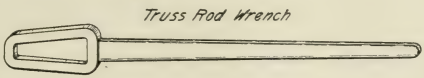
Forge:

1–Per first wrench..... .....
2–Per wrench after first one..... .....

TOOLS

Wrench, Tap—Double- or Single-end

WRENCH, TRUSS ROD—CAR REPAIRER'S



4Y650–13 Made. **Rate**.....

Includes getting material, forging, cutting, slotting, dressing and finishing car repairer's truss rod wrench complete.

1–Per first wrench..... .....
2–Per wrench after first one..... .....

4Y650–18 Straightened. **Rate**.....

Includes straightening old car repairer's truss rod wrench complete.

1–Per first wrench..... .....
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